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ABSTRACT

This collection of resources contains abstracts of selected research studies and theoretical expositions dealing with psychosocial aspects of drug use, culled from professional literature published between 1974 and 1977. The 13 topics covered in this survey include: sex, pregnancy, attitude change, family/peer influences, employment, crime, criminal justice, cocaine, personality, psychopathology, and driving. Each reference is outlined by a chart in terms of the drug used, sample size and type, age, sex, ethnicity, geographical area, methodology, data collection instrument, dates conducted, and number of bibliographic references. Further details are provided in statements focusing on the purpose, methodology, results, and conclusions of the research. (Author/HLM)

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RESEARCH ISSUES
UPDATE, 1978

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Foreword

The issues of psychosocial drug use and abuse have generated many volumes analyzing the "problem" and suggesting "solutions." Research has been conducted in many disciplines and from many different points of view. The need to bring together and make accessible the results of these research investigations is becoming increasingly important. The Research Issues Series is intended to aid investigators by collecting, summarizing, and disseminating this large and disparate body of literature. The focus of this series is on critical problems in the field. The topic of each volume is chosen because it represents a challenging issue of current interest to the research community. As additional issues are identified, relevant research will be published as part of the series.

Many of the volumes in the series are reference summaries of major empirical research and theoretical studies of the last fifteen years. These summaries are compiled to provide the reader with the purpose, methodology, findings, and conclusions of the studies in given topic areas. Other volumes are original resource handbooks designed to assist drug researchers. These resource works vary considerably in their topics and contents, but each addresses virtually unexplored areas which have received little attention from the research world.

Dan J. Lettieri, Ph.D.
Thomas J. Glynn, Ph.D.
National Institute on Drug Abuse

Preface

The Research Issues Series (RIS) presently consists of 20 volumes of theoretical and research literature dealing with the social and behavioral implications of man's involvement with drugs. Each volume focuses on a topic of current interest to the drug research community. Two basic types of volumes are contained in the series. RESOURCE HANDBOOKS are composed of original research and research tools that provide needed assistance to drug researchers in areas that have previously received little attention. REFERENCE SUMMARIES present abstracts of selected research studies and theoretical expositions dealing with psychosocial aspects of drug use. It is the purpose of the Reference Summaries to present the latest and most relevant information on topical issues of concern to the drug research community. The first Reference Summaries began appearing in 1975; this volume provides new readings on topics previously covered in the following volumes:

1. DRUGS AND EMPLOYMENT
2. DRUGS AND SEX
3. DRUGS AND ATTITUDE CHANGE
4. DRUGS AND FAMILY/PEER INFLUENCE
5. DRUGS AND PREGNANCY
6. DRUGS AND DEATH
7. DRUGS AND ADDICT LIFESTYLES
15. COCAINE--SUMMARIES
17. DRUGS AND CRIME
18. DRUG USERS AND THE CRIMINAL JUSTICE SYSTEM
19. DRUGS AND PSYCHOPATHOLOGY
20. DRUG USERS AND DRIVING BEHAVIORS

Many of these topics are interrelated. Readers are therefore encouraged to examine all of the volumes which might contain information in their area of interest. A computer-generated CUMULATIVE INDEX to the entire series is presently being prepared. This index will be an invaluable guide to drug researchers, assisting them to locate series studies that deal with their research areas.

The studies that have been summarized in this "update" volume are listed alphabetically by author immediately following the Preface. Within the volume, the summaries are organized by topic areas and are arranged alphabetically within each topic area. Articles often deal with more than one topic area. In each case, the article is classified by its major focus. Each summary is intended to be a faithful representation of the original study, conveying the study's purpose, methodology, results, and conclusions. Each author's word usage and spelling were followed as closely as possible.

An extensive and comprehensive literature search was carried out to identify materials for inclusion in this volume. Major clearinghouses, data bases, library collections, and special bibliographies were searched. The editors also corresponded with professional organizations, institutions, and research specialists in searching for relevant materials. Current issues of newsletters and journals were scanned throughout the project. The list of bibliographic sources searched includes:

Addiction Research Foundation, Bibliographies
Dissertation Abstracts
Index Medicus
National Criminal Justice Reference Service
Psychological Abstracts
Public Affairs Information Service
Research in Education
Social Sciences Citation Index
Sociological Abstracts

The criteria for selection of documents were drawn up by a consultant group of drug researchers working with the contractor and representatives of the National Institute on Drug Abuse. For inclusion, a study had to meet the following general criteria:

- Empirical research studies with findings pertinent to the particular topic, or major theoretical approaches to the study of that topic.
- Published between 1974 and 1977, preferably in the professional literature.
- English language, with a focus on American drug issues.

After a first review of citations and annotations, to weed out obviously irrelevant materials, the body of collected literature was subjected to two reviews: one to ensure that materials met the selection criteria, and a second, accomplished by a peer review group, to ensure that studies representative of the universe were included. Each completed abstract was subsequently reviewed to ensure that it reflected accurately and faithfully the contents of the study.

The talents and contributions of many individuals made this volume possible. Researchers who served on the peer review panel provided critical input in the selection of the articles and studies.

Peer Review Group

Carl Chambers, Ph.D. - University of Florida
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Family/Peer Influence

Illustration:

The figure of Urizen or the Ancient of Days
William Blake
Frontispiece from *Europe*
Illuminated printing

Alexander, Bruce K., and Dibb, Gary S. Opiate addicts and their parents. Family Process, 14(4): 499-514, December 1975.

DRUG	Opiates
SAMPLE SIZE	18
SAMPLE TYPE	Addict-families
AGE	Adults
SEX	Both Sexes
ETHNICITY	White
GEOGRAPHICAL AREA	Vancouver, British Columbia
METHODOLOGY	Exploratory/Survey; Case Studies
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics; Psychiatric Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	26

PURPOSE

A minority of opiate addicts maintain close emotional and financial relationships with their parents. These addicts and their parents are referred to as "addict-families." A group of 18 addict-families in family therapy were studied in order to determine the type of interaction in addict-families and its relation to the persistence of addiction. Characteristics of addicts and their families were also examined.

METHODOLOGY

Between July 1972 and August 1974, a social worker in the Vancouver, British Columbia, area worked with 18 addict-families who sought therapy. Only those families were used in which a son or daughter between 18 and 28 years of age was addicted to an opiate drug, and in which he or she maintained a close social relationship to the parents. Addiction was defined as the condition of having taken an opiate drug daily for at least three months. All the families but one had steady incomes from a parents' employment; one mother was on welfare. All were Caucasian, and both parents were living at home in 11 of the 18 families; in 7, there was no father. In 13 of the families, the addict was a male. The median age was 21, and in almost every case the addict was using methadone or heroin during at least part of the therapy period.

In order to provide information on the characteristics of addicts and their families, the records of the Narcotic Addiction Foundation of British Columbia were searched.

RESULTS

Regarding characteristics of addicts and their families, information in 450 Foundation files suggested the existence of at least two types of family relationships: (1) one in which addicts left home early, rarely returned, and were dissatisfied with the parent-child relationship; and (2) one in which addicts left home later (if at all), maintained close contact with the parental home if living away, and were satisfied with the parent-child relationship (referred to as the addict-family). For both sexes, the percentage living with parents declined with age (for males, 61% of the addicts 19 and under lived with parents, while none 35 or over lived with parents; for females, 16% of those 19 and under lived with parents, while 11% 35 and over lived with parents). In both sexes, the age distribution differed significantly (males, $p<.001$; females, $p<.02$). Overall, more male than female addicts lived with their parents (23% vs. 14%; $p<.05$).

For the majority of the 18 addict-families in therapy, the parents were more successful in meeting reality demands than the addict. The parents who supported the family had secure jobs or professions, and appeared confident of their abilities. The mother took responsibility for the household, and the home was conventional, neat, and well cared-for. The addict had difficulty finding and keeping a job; he usually held a simple laboring job or worked for his father. He did poorly in school (was usually a dropout by grade 10), had difficulty keeping a driver's license because of tickets and accidents, failed to pay his debts, and failed to keep appointments. He was unable to get up in the morning without parental chastisement, was sloppy in caring for his clothes and possessions, and refused to help care for the home. He had no plans for the future, and in many cases faced criminal charges for drug offenses or theft.

Relations between addicts and parents and between the parents themselves were congenial, calm, polite, and conventional during therapy. Parents and addicts often asserted that the addiction was the only family problem they could think of. When disharmony did arise in therapy, it usually took the form of the parents blaming the addict about drug use and lack of responsibility; the addict acknowledged his errors and made suggestions for future improvement. In therapy, overt anger was very rare; outside of therapy there was frequent nagging and an occasional explosion of rage, although no important communication occurred at these times. However, families described their relationships outside of therapy as also harmonious and conventional. Although the addict did not comply with his parents' urgings to help with chores, meet financial obligations, or discontinue his drug use or association with drug users, he was able to obtain money and other concessions from his parents by nagging, by accusing the parents of insufficient caring, by threatening to leave home or engage in self-destructive behavior, and by making contracts that he failed to uphold.

The parents used their money and energy extravagantly to indulge the addict, who relied heavily on the parents to meet his needs. Most parents did such things as driving addicts to appointments, calling to make excuses for them, and providing money for expensive clothes; the addicts were confident that they would be supported and allowed to live at home regardless of what they did. The parents confirmed this. In two-parent families, both parents were frequently involved in the overindulgent relationship with the addict. When one parent was primarily involved, the more peripheral parent sometimes referred to the need for the addict to move away from the parental home. Although the parents tried to control many aspects of the addicts' behavior, they did not help them to acquire adult skills and attitudes or to take realistic steps toward independence. Finally, parents and addicts shared a perception of the addict as a failure, and families attributed the failure of the addict either to the heroin habit or to some form of ego-weakness. Many parents asserted that, prior to getting into drugs, the addict had been unusually gifted and/or charming, usually the most gifted among his siblings. Insanity was never used as a label.

CONCLUSIONS

It is hypothesized that the relationship between opiate addicts and their parents reduces the possibility of the addicts' developing a satisfactory lifestyle without addiction, and that, in addict-families, opiate addiction and family process perpetuate each other. If this is true, the therapist has two logical alternatives: to pry the addict away from the family, or to change the family process in a direction that promotes the growth of the addict rather than his continued dependence. Both alternatives are problematic. The addict-family syndrome presents a vital challenge to family therapists to develop methods powerful and subtle enough to change families in which resistance is high, the connection between family process and the presenting problem is easily denied, and the need for intervention is great.

Baer, Daniel J., and Corrado, James J. Heroin addict relationships with parents during childhood and early adolescent years. Journal of Genetic Psychology, 124:99-103, 1974.

DRUG	Heroin
SAMPLE SIZE	200
SAMPLE TYPE	Treatment (inpatient); General Population
AGE	Adolescents; Adults (16-29)
SEX	32 Female; 68 Male
ETHNICITY	82 White; 18 Other
GEOGRAPHICAL AREA	Massachusetts
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Psychological Tests; Biographical Inventory
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	10

PURPOSE

Faulty parent-child relationships and poor self-image are frequent correlates of subsequent drug problems (Lombardi, 1967; Rosenberg, 1969; Weinrebe, 1968). In this study, the kinds of relationships that heroin addicts have with their parents during childhood and early adolescence were examined.

METHODOLOGY

A sample of 100 addicts, each of whom had a heroin problem and was a participant in one of various rehabilitation programs, were selected from throughout the state of Massachusetts. Ages ranged from 16 to 29 years; 18 were nonwhite, and 82 white; 32 were female, and 68 male. A comparison group of 100 nonusers of heroin were selected from the same geographical region to match the addicts in age, race, sex, and educational level.

The Biographical Inventory, containing 19 multiple-choice items pertaining to parental relationships, was used (Glennon et al., 1964). Thirty-seven additional items concerning previous drug usage and background data were included for supplementary information.

RESULTS

Fifteen of the nineteen statements were statistically significant ($p<.05$). Addicts were less likely to report having had a happy childhood ($p<.01$), but more likely to desire to relive part of their childhood or teen years ($p<.001$). Physical punishment during childhood was more prevalent for addicts ($p<.01$); it was more common for mothers to be employed when the addicts were children ($p<.01$); significantly more addicts had freedom in the evening as teenagers ($p<.01$), but fewer were encouraged to bring friends home ($p<.001$); and fewer parents of addicts expressed interest in their children's school performance ($p<.001$). Addicts tended less often to describe their fathers as "pals" ($p<.05$), and their mothers as well-intentioned individuals ($p<.05$). For addicts, religion was less often an important aspect of family life ($p<.05$), and parents were more likely to condone premarital sex ($p<.001$). Finally, addicts were less inclined to turn to their parents for sympathy when they were worried or injured ($p<.05$). It was more likely that parents of nonusers lived together ($p<.05$), assisted in the career planning of their children ($p<.001$), and were the people of greatest influence in their children's conduct.

CONCLUSIONS

While many factors during the initial phases of drug usage contribute to subsequent addiction, these results suggest that earlier life histories of individuals may also be important predisposing influences. Further, it is apparent that the Biographical Inventory approach is a promising technique for obtaining this type of autobiographical data from heroin addicts.

Bowker, Lee H. The influence of the perceived home drug environment on college student drug use. Addictive Behaviors, 1(4):293-298, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	948
SAMPLE TYPE	College Students
AGE	Adults
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Midwest
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	20

PURPOSE

There is scattered evidence that adolescent and young adult drug users perceive their parents as being more drug-oriented in terms of attitudes and use than do nonusers. However, there is no systematic study of the variables subsumed under the perceived home drug environment available in the literature. An attempt was made to remedy this deficiency by relating variables drawn from the perceived home drug environment to student use of the full range of drugs available on a college campus.

METHODOLOGY

Subjects consisted of 948 students at a small liberal arts college in the Midwest. The students generally came from upper-middle-class homes, and had high scholastic averages and college entrance examination scores. All students filled out a questionnaire which contained items about the use of 10 categories of drugs, the perceived home drug environment, the perceived peer drug environment, and selected demographic variables. Using rating scales, respondents were asked to estimate the use of drugs by their parents and siblings, and the attitudes of parents toward drug use.

RESULTS

A total of 50 relationships between the perceived home drug environment and student drug use were examined. Thirty-eight of these relationships were significant at the .05 level or better. All the associations were in the same direction, with higher perceived drug use or more positive perceived attitudes towards drugs being associated with subject's higher use of drugs. The four groups of variables comprising the perceived home drug environment were: (1) perceived mother's drug use, (2) perceived father's drug use, (3) perceived drug use of siblings, and (4) perceived parental attitudes toward drug use. There was a tendency for males to be equally influenced by their perceptions of the drug use of both parents, while the perception of mother's drug use had more of an influence on female student's drug use than did perceived father's drug use. Relationships between mother's, father's and siblings' drug use and subject's use of alcohol and tobacco were weaker than those for drugs such as marihuana, hashish, amphetamines, and tranquilizers. Siblings appeared to have more influence over the subject's drug use than parents. All of the relationships between sibling drug use and student drug use (N=7) were statistically significant, while 11 out of 14 relationships between mother's drug use and student use were significant, as were 7 of 11 relationships between father's drug use and student use.

CONCLUSIONS

The results of the present study are consistent with the conclusions of earlier studies with respect to perceptions of both parental drug use and parental attitudes toward drugs. One explanation for the greater influence of siblings is that a student's brothers and sisters are more likely to be using the same drugs he or she is, but parents typically do not use illegal drugs that are common on college campuses. Another factor is that siblings are often either in the subject's peer culture or close to it, and the evidence available at present suggests that the peer environment has a greater effect on student drug use than does the home environment.

Burkett, Steven R. Religion, parental influence, and adolescent alcohol and marijuana use. Journal of Drug Issues, 7(3):263-273, 1977.

DRUG	Marihuana; Alcohol
SAMPLE SIZE	837
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	Both Sexes
ETHNICITY	White
GEOGRAPHICAL AREA	Pacific Northwest
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

PURPOSE

Over the years various investigators have examined the relationship between religiosity and juvenile delinquency; however, the issue of religion as an effective deterrent to delinquency remains largely unresolved. A survey was conducted to determine the extent to which parents' religiosity is related to the acquisition of religious and moral values by adolescents, and the extent to which parents' religious involvement is differentially related to marihuana and alcohol use by adolescents.

METHODOLOGY

Anonymous questionnaires were administered to all seniors at three Pacific Northwest high schools. No differences between schools were found with respect to respondents' religious participation, social class background, and frequency of alcohol and marihuana use. Complete data were available for 837 students, all of whom were white. Parents were categorized into three types with respect to religious participation: "regular" (N=300) included families in which one or both parents attended church every week; "occasional" (N=282) included families in which one or both parents attended church at least once a month, but neither attended regularly; and "never" (N=255) included those in which neither parent attended church more than once or twice a year. Religious participation was also assessed for the respondents. The students responded to three scales used by Burkett and White (1974) to measure the acceptance of certain moral values and worldly authority, and a belief in the possibility of supernatural sanctions. The criterion variables, alcohol and marihuana use, were measured by responses to questions on frequency of use. The interrelationships between the scales and respondents' religious participation and the use of marihuana and alcohol were examined. In addition, the impact of parental church attendance was examined to determine what effect this had on the basic relationships.

Findings are reported in terms of gamma values. Values of up to ±.15 indicate nonexistent or weak relationships; values between ±.16 and ±.25 suggest moderate associations; values between ±.26 and ±.35 are relatively strong; values equal to or greater than ±.36 are considered strong.

RESULTS

The data indicated relatively strong negative relationships between religious participation and marihuana and alcohol use; those who attended church were less likely to smoke marihuana and to drink than were those who did not attend church or did so infrequently. At the same time, these relationships were not a function of a belief in the supernatural. Whereas those who attended church were more likely to maintain such beliefs (gamma=.48), the acceptance of these beliefs was not at all related to marihuana use (-.13) and only moderately to alcohol use (-.19). Attending church was not necessary for acceptance of worldly authority (.22), which was strongly and negatively related to both marihuana and alcohol use (-.54 and -.45, respectively); nor to morality (.18), which was moderately related to marihuana use (-.20) and strongly related to drinking (-.41).

Parents' religious participation was, as expected, strongly related to the religious participation of respondents (.69). In addition, respondents whose parents attended church were more likely to express a belief in supernatural sanctions (.41); this was true whether or not the respondents themselves attended church. Parents' church attendance was only moderately related to the respondents' belief that the use of alcohol and marihuana was sinful (.22). Those respondents who attended church were more than twice as likely to believe that use of these substances was sinful than were those who did not attend regardless of parents' religiosity. Thus, while youth from religious families who did not attend church were quite likely to believe in the supernatural, many of these same youth rejected the belief that marihuana and alcohol use was sinful. Parents' church attendance was not related to an acceptance of moral values, nor was it related to an acceptance of worldly authority, both of which were related to alcohol and marihuana use.

Both alcohol and marihuana use were highest among youth who did not attend church, but whose parents attended regularly. Fully half of these youth, and 46% of those who did not attend church but whose parents attended occasionally, indicated that they drank regularly. Comparable figures for marihuana use were 74% and 57%. Conversely, only 25% and 18% of those cases in which both youth and their parents attended church regularly or occasionally, drank; and 34% and 29% of these same youth reported smoking marihuana either regularly or experimentally.

CONCLUSIONS

While religion is for some youths quite effective in deterring the use of alcohol and marihuana, religious participation by parents does not appreciably affect this relationship. Both alcohol and marihuana use are most frequent among the disaffiliated; that is, among youth most likely to be exposed to religion in the home, but who reject the church and whose family ties are weak, at least in terms of parental control over their actions. Whether the breaking of ties from both family and church precedes or follows involvement in a subculture which supports use is a question that remains for future research.

DeForest, John W.; Roberts, Thomm K.; and Hays, J.R. Drug abuse: A family affair? Journal of Drug Issues, 4(2):130-134, Spring 1974.

DRUG	Not Specified
SAMPLE SIZE	62
SAMPLE TYPE	Mothers of drug abusers; Volunteers
AGE	Adults (mean 43)
SEX	Female
ETHNICITY	White
GEOGRAPHICAL AREA	Houston, Texas
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	MMPI; Interpersonal Check List
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	13

PURPOSE

There is growing evidence that the modern adolescent drug abuser is substantially different, socially and psychologically, from his predecessors. It might be expected that the parents of these drug abusers are different from other parents, as drug abusers are different from other groups of disturbed children. In order to test this hypothesis, a group of mothers of drug abusers was studied.

METHODOLOGY

A group of 31 mothers of patients was drawn from the Drug Abuse Clinic at the Texas Research Institute of Mental Sciences in Houston, Texas. All the mothers were white. Their mean age was 43 years; 55% were in their first marriage, 43% had been married two or more times, and two were divorced. A comparison group of mothers matched with the drug abuse mothers on the basis of age, education, ethnic background, and socioeconomic status was obtained from churches in the Houston area. Over 90% of the comparison group were in their first marriage. The socioeconomic status of the two groups was classified by husband's occupation at the professional or white-collar level.

The Interpersonal System was used to study the drug abuse mothers. The system assesses four levels of personal and interpersonal behavior: (1) public behavior; (2) conscious description of self and others; (3) motives and actions as expressed in fantasy, dreams, and creativity; and (4) conscious ideal. The levels were measured by the MMPI and the Interpersonal Check List (ICL).

RESULTS

A majority (80%) of the women in both groups appeared to others and described themselves as independent, striving individuals pursuing responsible goals in a conventional manner. Fifty-two percent of both groups idealized this mode of interpersonal behavior. In addition, a majority of the women in both groups were self-accepting (50%) and accurately self-perceiving (65%). Despite these similarities, the two groups differed significantly on the degree of identification with mother, and on their perceptions of spouse and child. Almost 50% of the drug abuse mothers disidentified with their own mothers, while only 33% of the comparison group did so ($p<.05$). The drug abuse mothers tended to see themselves as conventional and passive; they saw their mothers as more active and independent. The comparison mothers generally described themselves as responsible, generous and active individuals, much like their own mothers.

Significantly more of the drug abuse mothers than the comparison mothers viewed their husbands' behavior as hostile, critical, and arrogant ($p<.05$). The experimental group of mothers perceived their husbands as men who used their power to humiliate and degrade others. In contrast, the majority of the comparison wives described their husbands as strong leaders who were followed because they were respected. Almost half of the drug abuse mothers described their children as resentful, bitter, and hostile; only 13% of the comparison mothers described their children in these ways ($p<.01$).

CONCLUSIONS

The data suggest that the patients' mothers are not seriously disturbed or pathological in their adjustment. They appear secure in their roles as women. However, in contrast to the comparison mothers, they appear to have grown up in a family situation in which there was little, if any, interchangeability of roles and power. The father was typically the more powerful and unfriendly family member, and the mother the more actively helping parent. The present family situations of the two groups also appeared to be substantially different. In the comparison families, all members seemed able to exchange and cooperate in their interpersonal roles; in the drug abuse families, the members appeared more rigidly fixed or stereotyped in their respective roles. All members of the drug abuse family have adopted interpersonal styles which may be broadly defined as help-rejecting. The members are likely to resist therapeutic intervention focused on the family as a whole. However, such emphasis appears necessary.

Frankel, Phylis M.; Behling, Charles F.; and Dix, Theodore. The parents of drug users. Journal of College Student Personnel, 16(3):244-247, May 1975.

DRUG	Multi-Drug
SAMPLE SIZE	95
SAMPLE TYPE	College Students
AGE	Adults (mean 19.5)
SEX	46 Male; 49 Female
ETHNICITY	91% White
GEOGRAPHICAL AREA	Midwest
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

PURPOSE

Interest in the causes of extensive drug use has stimulated a great deal of research on personality correlates of usage. Many investigators have found that drug users are often oppositional to the parents, that the alienated student is likely to be drug-prone, and that in the family triad, mother and son are generally united against father. A group of college students was surveyed in order to investigate the dynamics of students' perceptions of their parents as a personality dimension which may be related to extensive drug use. It was hypothesized that drug usage is related to (a) perceived parental warmth or coldness, (b) perceived parental permissiveness or restrictiveness, and (c) perceived alienation from parental values and lifestyle.

METHODOLOGY

Subjects consisted of 95 college students from five private Midwestern colleges. There were 46 men and 49 women, whose mean age was 19.5. The subjects were predominantly white (91%) and of middle- to upper-middle-class background. Subjects were given a test battery including the Drug Orientation Scale and the Perception of Parents Scale. The Drug Orientation Scale measured the type and degree of drug usage. The Perception of Parents Scale measured how students perceived their parents on a 7-point scale on four categories: warmth versus coldness, permissive versus restrictive, degree of acceptance of parent's values, and degree of acceptance of parent's lifestyle.

RESULTS

Perceived warmth of father exhibited a significant negative correlation with student drug use for the following drugs: marihuana ($p<.05$), hallucinogens ($p<.05$), stimulants ($p<.05$), and total use ($p<.01$). Mother's warmth was not significantly related to use. Permissiveness of parents was generally not significantly related to drug use; however, father's permissiveness tended to be negatively related to use, and mother's permissiveness tended to be positively related to use. As expected, acceptance of perceived parental values and lifestyle was significantly and negatively related to use. Nonacceptance of father's values was significantly related to use of marihuana ($p<.01$), hashish ($p<.05$), stimulants ($p<.01$), depressants ($p<.05$), and total use ($p<.01$). Nonacceptance of mother's lifestyle was significantly related to use of marihuana, hashish, hallucinogens, stimulants (all at $p<.01$); depressants ($p<.05$); and total use ($p<.01$).

Male subjects were significantly more likely than females to be heavy drug users ($p<.01$). The strength of all correlations was greater for males except for perceptions of mother's values and lifestyle. In these two cases, correlations for females were higher than for males.

CONCLUSIONS

Perceived parental relationships play a significant role in extensive drug use in young people. The data suggest that the student's perceived relationship with his or her father is especially critical. The heaviest drug users perceived their fathers as "cold." This relationship was more significant than the permissiveness or restrictiveness of the father, although there was a tendency for the father to be seen as restrictive. Neither the warmth nor the permissiveness of the mother was significantly related to frequency of drug use. By examining young persons' perceptions of their parents, early identification of drug-prone individuals may be possible. The concept of perception of alienation from father may have implications for preventive treatment of drug problems.

Lerner, Steven E., and Linder, Ronald L. Birth order and polydrug abuse among heroin addicts. Journal of Drug Education, 5(3):285-291, 1975.

DRUG	Opiates; Multi-Drug
SAMPLE SIZE	198
SAMPLE TYPE	Treatment
AGE	Adults (18-64)
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	November 9, 1972 - January 5, 1973
NO. OF REFERENCES	7

PURPOSE

To determine the significance of possible relationships between birth order and polydrug use patterns of heroin addicts prior to undergoing treatment, a group of addicts in treatment in the San Francisco Bay Area was studied.

METHODOLOGY

A drug-use questionnaire was designed to reveal birth order (youngest, oldest, between, and only child) and the use of certain psychoactive drugs without medical supervision prior to entering the designated treatment program. The patients were instructed to indicate whether they had used, one or more times during the past year, a variety of drugs including alcohol, marihuana, LSD, barbiturates, cocaine, glue, amphetamines, codeine, nitrous oxide, tobacco, mescaline, and tranquilizers. A total of 198 patients were tested with the instrument between November 9, 1972, and January 5, 1973. The patients under treatment were predominantly over 21 years of age.

RESULTS

In the sample of 198 heroin addicts, 50 (25%) were the youngest child, 60 (30%) were the oldest child, 56 (28%) were in between, and 32 (16%) were only children. Only children were over-represented since the frequency of only children in the general population is far less than 10%. Among the patients studied, the majority (72%) within all birth order groups used other drugs one or more times during the past year while addicted to heroin. The polydrug abuse patterns in rank order of frequency of use in combination with heroin included: tobacco, marihuana, alcohol, cocaine, codeine, and tranquilizers. In a comparison of those patients using other drugs at least once or more in the year prior to undergoing treatment, no statistically significant differences by birth order were obtained. However, among the only children heroin addicts who used other drugs once or more each week, a general trend of lesser use of alcohol, amphetamines, barbiturates, tranquilizers, LSD, mescaline, glue, and nitrous oxide was evident.

Miller, Barry. Student drug use: Attitudinal, parental relations and sex differences--A pilot study. International Journal of the Addictions, 11(6):1079-1084, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	111
SAMPLE TYPE	College Students
AGE	Adults (mean 21.6)
SEX	53 Male; 58 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1972-73 Academic Year
NO. OF REFERENCES	4

PURPOSE

Relatively few studies of student drug abuse have dealt with attitudes held by the drug abusers, parent-child relations, and sex differences. In order to obtain such information, a survey of undergraduate student drug users was undertaken during the 1972-73 academic year.

METHODOLOGY

Data were collected from 53 male and 58 female undergraduate students at two Pennsylvania universities. The mean age of the students was 21.6 years. Subjects indicated whether or not they never used, had used but were currently not using, or were presently using any of a variety of drugs including sedatives, stimulants, hallucinogenics, narcotics, tranquilizers, and nonnarcotic analgesics. The subjects also took the Roe and Siegelman Parent-Child Relations (PCR) Questionnaire, Mother's and Father's Forms. The questionnaire contains statements regarding parental behavior and one's relation to his/her parents. Four semantic differential techniques were used to measure the subjects' attitudes toward "The Real Me," "How Others See Me," "The World in Which I Live," and "The Drug Addict." Each semantic differential contained 20 pairs of adjectives, separated by a seven-point scale. A score of 1 was assigned to that position on the adjective pair pole which was closest to the adjectives with the positive connotation. A score of 7 was assigned to the position with a negative connotation.

RESULTS

According to the data obtained, 36% of the subjects admitted to presently using illicit drugs, and 32% admitted using before but not presently. Of those admitting ever having used drugs, 25% indicated use of sedatives; 20% had used stimulants (11% of which was cocaine); 11% admitted using

LSD; 51% used marihuana; 14% used mescaline; and 18% admitted to the use of narcotics. Sixteen percent of the subjects indicated that their mothers were frequently users of sedatives; 74% of these were present drug users.

Regarding parent-child relations, female present drug users perceived their mothers as being less loving, more rejecting, neglecting, demanding, less rewarding, and more punishing than females who have never used drugs. These results held only for the relationship with the mother and not with the father. The results were also consistent with the comparisons between male and female present users in that the females again perceived their mothers as being less loving, more rejecting, and less rewarding than male drug users. With the exception of perceiving their mothers as being more punishing, no differences emerged between male present users compared to male nonusers with respect to either mother or father. On the semantic differentials, females who were presently using drugs or had used them in the past, when compared to similarly abusing males, had poor self-images, felt others were aware of their negative traits, and regarded their environment as aggressive and hostile.

Comparing female present users with female never users, the present user perceived herself as being friendly but agitated and apprehensive. The female present user in comparison to the male present user viewed the drug addict as trusting, calm, fair, valuable, and happy. Analyses of the comparisons between present, past, and never male drug users yielded few significant findings.

CONCLUSIONS

In light of the data, it is possible that the etiological factors in female drug use are variables which are emotional and psychodynamic in nature. Additionally, it is suggested that the etiological variables surrounding male drug use are related neither to parent-child relations nor to self-image, but to collegiate environmental variables such as experimentation, curiosity, and group conformity.

Schwartzman, John. The addict, abstinence, and the family. American Journal of Psychiatry, 132(2):154-157, February 1975.

DRUG	Barbiturates; Heroin
SAMPLE SIZE	21
SAMPLE TYPE	Families of Addicts
AGE	Adolescents; Adults
SEX	Both Sexes
ETHNICITY	Predominantly White
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Psychiatric Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	22

PURPOSE

There is general agreement in the literature on the structure of the families of drug addicts, and the effects of these structures on the addiction of family members. Most of the research on opiate addiction is addressed only to the physiological effects of drugs, and assumes that the structure of the family compounds the addict's physiological dependence because it reinforces his feeling of inadequacy and his low self-esteem. However, if one assumes that the effects of any drug are modifiable by the context of drug use and by the characteristics of the user, a different explanation is suggested as to how the families of drug addicts function in relationship to the inability of addicts to tolerate abstinence. In order to look at this relationship between addict, abstinence, and the family, 21 predominantly white working-class families, each of which included at least one male heroin or barbiturate addict, were studied.

METHODOLOGY

Twenty-one families of barbiturate or narcotics addicts were seen in 1-22 one-hour psychotherapy sessions. Information was also collected in informal interviews with the addicts in these families, and with other addicts. Addicts ranged in age from 16 to 36, with an average age of about 23. The addicts were seen at an inpatient drug unit, an outpatient methadone clinic, or an outpatient mental health clinic.

RESULTS

There were no significant differences between the families of heroin addicts and those of barbiturate addicts. Most of the heroin addicts used barbiturates occasionally, but very few of the barbiturate addicts ever used heroin. However, the barbiturate addicts were more likely to drink excessively.

The beliefs about drugs that affected family relationships included the following: it is difficult, painful, and dangerous to withdraw from drug use; there is a euphoria or "high" gained by drug use; and, perhaps most importantly, the addict's behavior is out of control. It was assumed by both the addict and his family that he could not stop using drugs and that he was not responsible for his behavior when under the influence of drugs. They also believed that he was unable to resist drugs if exposed to them. In one family with two barbiturate addicts, the neighborhood was blamed for the addiction problem because of the local prevalence of drug use. In all of the families, this feeling of powerlessness against drug use was reinforced by family members.

The mothers of the addicts were overprotective of their sons. The mother blamed her overprotectiveness on her husband's hostility toward their son or her husband's inadequacies as a father. The fathers were of two general types: one was described by other family members as authoritarian or violent but was actually easily controlled by the mother; the other was also seen as distant from his family, but was more clearly secondary to the mother in terms of power within the family. The father's attempts to control his son's behavior were always undercut by the mother. Conflict between the addict and his father was reinforced by the father's secondary position in the mother's affections, and his lack of authority in the household. The financial support provided by the father was his one source of gratification; at the same time, it was an excuse to remove himself from family conflict. Most of the fathers had very low expectations of their sons' success. Only two or three of the addicts were self-supporting. The rest were supported by their wives, parents, or in-laws. The addict was generally seen as inadequate by other family members as well as by himself, his mother, and his father.

The marital dyad in these families was characterized by emotional distance and a lack of interaction--except during those periods when the addict seemed to need the most help. The mutually accepted belief that the addict was unable to resist drugs functioned to make his parents interact, if only to argue about him. This kind of interaction caused even more tension in the household. Problems in the parental relationship were acted out through disagreements about the addict's drug use and his lack of employment. As a result of the familial conflict focused on his behavior, the addict saw himself as powerless and at the same time guilty of causing the problems between his parents.

CONCLUSIONS

The addict is caught in a paradox. He has been taught that "to be a man" means to have a job, but at the same time he is covertly encouraged to remain at home, unemployed, as long as he uses drugs. Within the family, much of the interaction focuses on trying to "convince" the addict not to use drugs, which implies that he has some control over his drug-related behavior. At the same time, all family members view the addict as incapable of resisting drugs. The result is that the addict continues to use drugs. This is reinforced by his social interaction outside the family, which is primarily among drug users or people involved with drugs. The relationships outside the family are generally nonintimate and transient. This subculture provides the addict with a set of norms and a way of life. This is reinforced in the families in which the addict's parents tell him that he cannot resist using drugs if he is with drug users. As a result, if the addict is with friends who are addicts, he is most likely to continue to use drugs. The description of these families of addicts suggests that therapy should be reoriented toward seeing the locus of the problem as existing among family members or other significant figures rather than in the addict. Therapeutic intervention in the addict's relationships with his addicted peers and with his family thus seems more promising than the more prevalent mode of group therapy among drug addicts.

Tennant, Forrest S. Dependency traits among parents of drug abusers. Journal of Drug Education, 6(1):83-88, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	1,091
SAMPLE TYPE	Military
AGE	Adults (mean 24)
SEX	Male
ETHNICITY	85% White
GEOGRAPHICAL AREA	West Germany
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	11

PURPOSE

Recent studies cast doubt on whether there is a significant association between parents' dependency traits and drug habits in their offspring. A survey of young male soldiers was undertaken to determine if parents' dependency traits, including smoking, drinking, overeating, and drug taking, are correlated with the soldiers' abuse of illegal drugs.

METHODOLOGY

A group of 1,091 males located at U.S. Army bases in West Germany, between the ages of 18 and 24, were selected. A questionnaire obtained information about the frequency of alcohol, cigarette, coffee, and illegal drug use. Independent variables were either demographic or related to parents' dependency traits relating to cigarette, alcohol, drug, and eating habits. Responses to illegal drug use were scaled as: never used; less than 3 times; 3 to 20 times; 1 to 3 times weekly; over 3 times weekly. Categories of frequency of use were defined as follows: nonuse as never used; occasional use as 1 to 20 total lifetime use; and abuse as one or more times weekly. The reported occurrence of dependency traits in parents of drug abusers was compared with that of nonusers.

RESULTS

The mean age of subjects was 24 years; approximately 85% were white; and 60% were single. Self-reported prevalence of illegal drugs showed that most of the population had never used hashish (59.3%), amphetamines (83.3%), or opiates (93.6%). Perceived dependency traits of parents showed that in 78.4% of the population, neither parent used sedatives; in 86.8% of the population, neither used stimulants; in 31.9% of the population, neither used cigarettes; in 36.2% of the population, neither used alcohol; and in 64.7% of the population, neither was overweight.

A 20% difference in occurrence between abusers and nonusers was found only in the case of opiates: at least 20% more parents of abusers than nonusers were reported to use alcohol, stimulants, and sedatives. There were significantly more abusers than nonusers of hashish and amphetamines who reported that parents used sedatives and stimulants ($p<.001$). This difference between the two groups was not always true with parents' use of cigarettes, alcohol, or overeating, and the reverse was even the case in two instances. A greater percentage of nonusers than abusers of hashish reported parents who smoked cigarettes ($p<.05$), and a greater percentage of nonusers than abusers of amphetamines reported parents who were overweight ($p<.001$).

CONCLUSIONS

This study is different from most previous studies that have attempted to identify psychosocial antecedents of drug and alcohol abuse because its subjects were not drug-involved offenders (arrestees, prison inmates, parolees), persons in drug treatment programs, residents of psychiatric hospitals, or students. This study suffers, however, from its retrospective recall nature, noninclusion of females, and less than 100% response to some questions. Association of parental dependency traits and other illegal drug abuse, although possibly having statistical significance, must be questioned for practical and social significance.

Tennant, Forrest S.; Detels, Roger; and Clark, Virginia. Some childhood antecedents of drug and alcohol abuse. American Journal of Epidemiology, 102(5):377-384, 1975.

DRUG	Alcohol; Amphetamines; Hashish; Opiates
SAMPLE SIZE	5,044
SAMPLE TYPE	Military
AGE	Adults (mean 23)
SEX	Male
ETHNICITY	77% White
GEOGRAPHICAL AREA	West Germany
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	June 1, 1971 - January 1, 1972
NO. OF REFERENCES	31

PURPOSE

Unsatisfactory intrafamilial relationships and child-rearing practices have frequently been associated with personalities susceptible to drug and alcohol abuse. Most studies that have attempted to identify childhood antecedents of alcohol and drug dependence have shortcomings, in that they have surveyed a small number of students, institutionalized subjects, or individuals in treatment programs. In order to provide an opportunity to compare childhood antecedents of a large number of abusers of illicit drugs and alcohol with nonusers, a survey of 5,044 U.S. Army soldiers stationed in West Germany was conducted.

METHODOLOGY

A group of 5,044 male soldiers between the ages of 18 and 24 were selected for study between June 1, 1971, and January 1, 1972. Approximately 60% were single and 77% were white. All levels of personnel were included in the study. Subjects filled out a questionnaire on childhood activities, and alcohol and drug use frequency. The drugs assessed were hashish, amphetamines, and opiates. Nonuse of drugs was defined as having never used; occasional use meant having used 1 to 20 times; abuse meant use one or more times weekly. Alcohol frequency was defined as: nonuse as five or fewer drinks per week; occasional use as 5-20 drinks per week; and abuse as more than 20 drinks per week. The reported occurrence of each childhood antecedent among abusers of alcohol and drugs was compared to the reported occurrence among nonusers.

RESULTS

The percentage of the subjects who reported using an illicit drug one or more times was, by drug category, marihuana/hashish, 35%; amphetamines, 17%; and opiates, 7%. The percentage of subjects (abusers) who reported using one or more times per week was as follows: hashish, 15%; amphetamines, 4.5%; and opiates, 2%. A total of 1,638 (32.5%) reported they drank 5 or less times per week; 493 (10%) reported they drank over 20 times a week, and were thus considered abusers. Reported difference in drug and alcohol use in whites and nonwhites was less than 10% in all categories. There was evidence of multiple drug use, with approximately 20% of the subjects reporting the use of two or more illegal drugs, and slightly over 10% reporting the use of three or more drugs.

Only a small number of childhood antecedents showed a 20 percent difference in reported occurrence between abusers and nonusers of illegal drugs, and none showed a 20% difference between abusers and nonusers of alcohol. The childhood antecedents which showed at least a 20% difference in occurrence between nonusers and abusers were as follows: (1) first drink of alcohol before age 9 was related to hashish abuse; (2) first drink of alcohol at age 15 or older was related to nonuse of hashish; (3) spanking was related to nonuse of amphetamines and opiates; (4) rarely or never punished was related to nonuse of amphetamines and opiates; (5) punished over three times per week was related to abuse of amphetamines and opiates; (6) church attendance less than five times before age 15 was related to abuse of amphetamines; (7) church attendance 50 or more times before age 25 was related to nonuse of amphetamines and opiates; (8) never watched television before age 25 was related to opiate abuse; (9) watched television over 10 hours per week before age 15 was related to nonuse of opiates; (10) divorced or separated parents was related to abuse of amphetamines and opiates; (11) parents' marriage described as happy was related to nonuse of amphetamines and opiates.

CONCLUSIONS

Only a few of the childhood antecedents included in this study appear to have possible practical or social significance. Household tasks, monetary allowance, parents' time in activities, alcohol use among parents, and noncontact punishments showed statistical significance but none demonstrated as much as 20% difference in reported occurrence between abusers and nonusers of illegal drugs. Of interest is that the same significant associations between childhood antecedents and drug abuse or nonuse were found among whites and nonwhites, and among subjects with single parents. Opiate nonusers reported more television watching than abusers, but it is likely that this finding represents an economic factor rather than any positive influence of television. Church attendance and spanking showed a marked association with nonuse of amphetamines and opiates, and to a lesser extent, in the case of spanking, with nonuse of hashish. Punishment over three times per week appeared to be deleterious, however, since it was associated with abuse of amphetamines and opiates. Even though occasional spanking, church attendance, and no alcohol until age 15 were highly associated with nonuse of illegal drugs, these antecedents may all represent some confounding variables not identified by this survey. The main intrafamilial factors that may lead to nonuse of drugs may be the same factors that lead parents to occasionally spank their children, send them to church, and withhold alcohol until age 15.

Tolone, William L., and Dermott, Diane. Some correlates of drug use among high school youth in a midwestern rural community. International Journal of the Addictions, 10(5):761-766, 1975.

DRUG	Hallucinogens; Stimulants; Marihuana
SAMPLE SIZE	136
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Illinois
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1972-73 School Year
NO. OF REFERENCES	20

PURPOSE

One concern of social scientists is the extent to which drug experience and usage have diffused throughout various groups in society, some of which may have been assumed to be "untouched" by the drug scene. In order to determine the extent to which high-school-age-youth living in a rural area had experimented with drugs, various influential variables were looked at: personal characteristics, family structure, peer relations, and drug education. It was hypothesized that the quality of the child-parent relationship would be negatively associated with student drug use, and that there would be a positive association between peer drug use and student drug use.

METHODOLOGY

A random sample of 136 high school students in a rural Illinois community were administered a questionnaire concerning personal characteristics, family life, peer group associations, drug education, and personal drug experience one year prior to the study. The amount of personal usage of marihuana included nonusers (no use during the previous year), experimenters (used 3 to 10 times in the past year), and users (used more than 10 times during the past year). Personal use of hallucinogens/speed included nonusers and users (any use at all in the previous year).

RESULTS

Neither age, grade, nor sex significantly determined drug usage rate. In contrast, several family variables significantly influenced drug usage ($p<.05$). Greater usage of marihuana existed among students from less intact families, but this was not observed as significant with respect to usage of hallucinogens/speed. Parental smoking and drinking habits were observed to be significantly related to student use of marihuana, but not to the use of hallucinogens/speed. Parental use of sleeping pills and tranquilizers was significantly related to student use of marihuana and somewhat related to use of hallucinogens/speed. The perceived amount of parental quarreling was not significantly related to drug use; perceived closeness to a parent was not significantly related to marihuana use but was significantly related to hallucinogen/speed use.

Peer influences were highly significant ($p<.0005$) in determining drug use. The number of peers who used marihuana and/or hallucinogens was very critical in determining personal use. Of the students who reported that none of their friends used marihuana, all were nonusers themselves. Of those students who reported that over one-half of their friends used marihuana, 60% were users themselves, and 84% were either experimenters or users. There were no significant differences between students who had or had not tried or used drugs with respect to whether they had received any drug education instruction.

CONCLUSIONS

Parental habits regarding the use of "legal" stimulants and depressants, the extent to which family structure is intact, and the nature of parent-child relationships all influence the probability of drug use. In addition, the strong correlations observed between students' drug behavior and that of their peers further support the notion that attitudes and behavior are learned socially through perception of examples, and association and participation in particular types of group structure and process.

Calhoun, James F. Attitudes toward the sale and use of drugs--A cross-sectional analysis. International Journal of the Addictions, 10(1):113-126, 1975.

DRUG	Multi-Drug
SAMPLE SIZE	399
SAMPLE TYPE	Students; Educators
AGE	Cross-Age
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Northeast U.S.
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	March 1972
NO. OF REFERENCES	9

PURPOSE

Many methodological weaknesses are evident in surveys of current attitudes toward drugs. Measures of attitude tend not to differentiate between types of drug, or between the legal, medical, and moral dimensions of drug use and sale. Response errors are frequent, due to a lack of anonymity. Comparisons are typically based on dissimilar studies. A survey was undertaken in which, in order that these methodological weaknesses could be eliminated, samples of specific groups--of students and adults--were surveyed on their differential attitudes toward the sale and use of specific drugs or drug types. Sampling various groups ensured that differences in attitudes could be examined systematically. Differentiations were made between drugs, which allowed for comparisons to be made between and among drugs in terms of a group's attitude about the drugs.

METHODOLOGY

During the last two weeks of March 1972, a survey was conducted in a Northeastern suburban school district and on the campus of a large state university to discover attitudes toward the sale and use of drugs. Eight drugs were inquired about in all questions: tobacco, alcohol, marihuana, barbiturates, amphetamines, hallucinogens, heroin, and cocaine. Six groups were sampled by the survey: 117 junior high school students, 73 senior high school students, 92 students from a state university, 39 parents of the junior and senior high students, 40 staff members at the university, and 38 teachers at the junior and senior high schools. The attitudes of the six groups about the use and sale of the eight drugs were considered on four dimensions: good vs. bad, legal vs. illegal, safe vs. dangerous, and addictive vs. nonaddictive.

RESULTS

Use of Drugs

Answers to the first question regarding the good versus the bad use of drugs indicated that all six groups concurred that the worst drug was heroin. The mean differences among the drugs were all significant beyond the .001 level except the differences between amphetamines and barbiturates and between the hallucinogens and cocaine. Across groups, alcohol was considered to be a significantly "better" drug than marihuana, and marihuana was considered to be significantly "better" than tobacco. The greatest variance in opinion concerned marihuana: across all groups, this variance was significant ($p<.001$). College students saw marihuana as significantly better than did any of the other groups. Across the groups, alcohol was rated as the "best" drug of the eight, significantly better than marihuana ($p<.001$). Junior high students saw tobacco as significantly better than did college students ($p<.001$) or parents ($p<.04$). Amphetamines, barbiturates, cocaine, and the hallucinogens were also rated similarly across the groups, with no significant differences among the groups for these four drugs.

On the legality-illegality of the use of drugs, heroin received the most "negative" response, although not significantly different from the hallucinogens or cocaine. The groups differed significantly in their attitude about the legality of heroin ($p<.001$). College students felt that heroin should be more legal than junior high students ($p<.012$) and senior high students ($p<.001$). Except for a nonsignificant difference in opinion between amphetamines and barbiturates, and between the hallucinogens and cocaine, all of the opinions across groups concerning the legality of drugs were significantly different at the .001 level. Alcohol was considered to be "better" (more legal) than all of the other drugs; tobacco was considered to be better than marihuana; and marihuana was considered better than the rest of the drugs. College students differed significantly ($p<.001$) from all of the other groups in their opinion as to the legality of marihuana (their opinion was that marihuana is or should be as legal as alcohol). There was some variation in opinion across the groups about the legality of alcohol ($p<.006$). The legality dimension concerning amphetamines, barbiturates, hallucinogens, and cocaine varied significantly across all groups and between some of them; tests of variance across groups were significant for barbiturates ($p<.004$), amphetamines ($p<.005$), hallucinogens ($p<.001$) and cocaine ($p<.001$). College students, more than junior high students, leaned more toward legality for barbiturates ($p<.02$), amphetamines ($p<.001$), hallucinogens ($p<.001$), and cocaine ($p<.001$). College students were also more liberal than were high school students toward hallucinogens and cocaine ($p<.002$).

For the dimension of safety (safe vs. dangerous), heroin was seen by all groups as the most "dangerous" drug ($p<.001$). Marihuana was considered to be the safest drug--significantly safer than alcohol ($p<.01$). Among groups, there were no significant differences regarding alcohol, heroin, and amphetamines. College students felt tobacco, hallucinogens, cocaine, and marihuana were significantly safer than did other groups.

Opinions regarding the addictiveness of heroin showed the least variation, while opinions concerning marihuana showed the most across all groups. Heroin was considered significantly more addictive than any of the drugs listed, and marihuana was considered the least addictive of the drugs (significantly less so than alcohol, $p<.001$), while alcohol was considered significantly less addictive than all of the other drugs listed ($p<.001$) except marihuana. Finally, barbiturates were seen as significantly more addictive than amphetamines ($p<.02$), and cocaine was considered significantly more addictive than hallucinogens ($p<.001$).

Sale of Drugs

Selling heroin was seen as significantly worse than selling any of the other drugs ($p<.001$). The sale of marihuana met with the largest variation in response; there were significant differences between college students and high school students ($p<.013$), and between college students and all other groups ($p<.001$). Alcohol was seen as significantly better to sell than all of the other drugs ($p<.001$). The difference between opinions on the sale of tobacco and the sale of marihuana was not significant across groups, although opinions concerning the sale of tobacco and marihuana were all significantly different from those concerning the sale of the other drugs ($p<.001$). Opinions expressed on the sale of amphetamines and barbiturates did not differ significantly from one another, nor were there any significant differences between or among groups in their opinions concerning these two drugs. While college students did differ significantly from the other groups in their evaluation of the sale of hallucinogens ($p<.03$ between college and senior high students, $p<.001$ between college and junior high students), there were no significant differences between groups in their evaluation of the sale of cocaine. Evaluations of the sale of cocaine and hallucinogens were significantly different ($p<.001$) from evaluations regarding the sale of the other drugs.

Alcohol and heroin called forth two extremes in opinion about the legality of sale of drugs, and also had the least variance in opinion. Between and among groups there were no significant differences in the responses to heroin ($p<.001$), with college students being the major source of variance (differing from junior high students at $p<.005$, and senior high students at $p<.002$). Both alcohol and heroin were significantly different from all of the other drugs in regard to this question. All other differences between drugs across groups were significant either at the .001 or the .05 level (between hallucinogens and heroin, $p<.05$; between cocaine and heroin, $p<.05$). College students differed significantly from junior high students in their evaluation of the legality of barbiturates, amphetamines, hallucinogens, and cocaine ($p<.001$); and from senior high students as to the legality of hallucinogens and cocaine ($p<.001$). The overall differences across all groups for these four drugs were $p<.004$ for barbiturates, $p<.002$ for amphetamines, $p<.001$ for hallucinogens, and $p<.001$ for cocaine.

CONCLUSIONS

As a result of the comparisons presented here, attitudes on drugs held by various subgroups can be understood in terms of their relative difference from, or similarity to, the attitudes held by other subgroups. More studies of attitudes across groups, drugs, and dimensions are needed in order to achieve a better understanding of attitudes toward the sale and use of illicit drugs.

Clark, Richard E.; Kowitz, Albert; and Duckworth, Diane. The influence of information sources and grade level on the diffusion and adoption of marihuana. Journal of Drug Issues, 5(2): 177-188, Spring 1975.

DRUG	Marihuana
SAMPLE SIZE	300
SAMPLE TYPE	Students
AGE	Children; Adolescents (10-17)
SEX	156 Male; 144 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	26

PURPOSE

In order to investigate the factors which influence personal decisions concerning marihuana use, a group of grade school students was studied. It was hypothesized that sources selected for information about marihuana would change with age; that older students would select a greater number of sources; and that older students would select fewer control and more personal sources than younger students. Also investigated were the diffusion-adoption stages of innovation described by Rogers (1962).

METHODOLOGY

A random sample of 300 5th-, 7th-, and 11th-grade students was drawn from the total population of three schools within a large California metropolitan area. The sample consisted of 144 girls and 156 boys. The four categories of information sources developed for the study were: (1) control sources, made up of vehicles for socially approved information (e.g., parents, teachers, newspapers, books, policemen, television, radio); (2) noncontrol sources, which provide "private" information which is generally not socially approved (movies, music, friends, peers, and siblings); (3) personal sources, defined as those involving communicative interaction with other human beings; and (4) impersonal or nonhuman vehicles for receiving information (television, radio, newspapers, books, and movies). All students were asked if they knew about marihuana, how they found out about it, and if they had any interest in the drug. Questions were asked to determine sources of influence for those students who decided not to try marihuana, those who reported a trial, and students who decided to adopt or continue using the drug.

When asked to state the names of all the drugs they knew, 81 5th graders, 88 7th graders, and 91 11th graders mentioned marihuana. When those not mentioning marihuana were asked if they knew of any drugs that are smoked, 14 5th graders, 12 7th graders and 8 11th graders responded "marihuana," indicating awareness.

The average number of sources of information regarding marihuana was 3.7 for 5th graders, 5.3 for 7th graders, and 6.6 for 11th graders. An analysis of variance indicated that there was a significant increase ($p<.01$) in the number of sources reported as grade level increased. The sources of information mentioned by more than 40% of the students at all grade levels were parents, television, and friends. A number of significant changes took place as grade level increased. With increases in grade level there were corresponding increases in the number of students mentioning teachers ($p<.01$), movies ($p<.01$), radio ($p<.01$), pamphlets ($p<.01$), newspapers ($p<.01$), books ($p<.05$), and friends ($p<.01$) as sources of information about marihuana. Sources which remained constant over grade level were parents, policemen, television, siblings, and other adults.

Students were then asked questions dealing with the information sources they selected at the awareness, interest, evaluation, trial, and adoption stages in their experiences with marihuana. At the awareness stage, there was a significant decrease from the 5th to the 11th grade in those mentioning learning from parents ($p<.01$) and television ($p<.01$); there was a significant increase from the 5th to the 11th grade for those mentioning learning from teachers ($p<.01$), newspapers ($p<.05$), and friends ($p<.01$). The mentioning of control sources decreased significantly from 5th- to 11th-grade students ($p<.01$). The mention of personal sources significantly increased from the 7th to the 11th grade ($p<.01$), and impersonal sources decreased significantly from the 5th to the 11th grade ($p<.01$).

Student interest in marihuana was assessed from responses to the question, "Have you ever looked for information about marihuana?" Only 107 students indicated active interest, and there were no significant differences between grade levels. At the evaluation stage, 5th graders thought their parents were the most accurate sources of information; 7th graders were equally divided between parents and friends as their most frequently mentioned accurate sources, closely followed by books, pamphlets, and teachers. Eleventh graders mentioned friends most frequently as accurate and inaccurate sources, although the predominant tendency was toward accurate information from friends.

At the trial stage, more older students had tried marihuana than younger students (none of the 5th graders, 20 of the 7th graders, and 51 of the 11th graders). The 11th graders mentioned more personal sources than the 7th graders irrespective of trial or no-trial status. Nearly the same finding was obtained for impersonal sources, although the no-trial 7th graders mentioned more impersonal sources than all other students. Regarding control and noncontrol sources, it was found that 7th graders and 11th graders who had tried marihuana mentioned noncontrol sources more frequently than no-trial students.

At the adoption stage, 11 7th graders said they would try the drug again, while 32 11th graders said they would do so. Continuing 7th-grade users tended to rely on their experience with marihuana when they made their decision to continue use; 11th graders, however, mentioned the influence of friends in addition to experience with the drug.

CONCLUSIONS

All of the hypotheses were confirmed; however, of greatest importance to drug abuse program planning is the fact that many potential and actual users of marihuana appeared unaware of the social and personal influence process surrounding decisions about marihuana use. Drug treatment programs should attempt to make students more aware of the personal and social pressures which serve to push them towards drug use by providing them with: (1) personally satisfying ways of responding to such pressure; (2) ways of tolerating conflicting claims about drugs and drug abuse; and (3) information-seeking behaviors which will widen the range of questions they ask before decisions are made at different stages in their learning about drugs. Training would be most helpful for the "transitional" 7th graders, while 5th graders appear to need preparation for the great increase in the types of influence they will encounter in the future.

Dorn, Nicholas, and Thompson, Anne. Research into expression of attitudes about drugs--What use is it? Bulletin on Narcotics, 28(2):19-33, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	1,796
SAMPLE TYPE	Students
AGE	Adolescents (range 15-17)
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	England
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

PURPOSE

Although knowledge about a population's behavior and attitudes is a necessary prerequisite for formulation of social policy, such knowledge in itself is not a sufficient basis for action. It is the assumption of this study that attitudinal data on illegal drugs has been combined with dubious background assumptions to provide support for theoretically unsound programs, particularly in the educational area. The purpose of this study was to obtain drug-related attitudinal data from secondary school students. It was hypothesized that pupils' social experiences and behavior would precede and influence their attitudes.

METHODOLOGY

Subjects consisted of 1,796 male and female students, most of them 15 and 16 years of age. The students filled out questionnaires designed to obtain data on the students' familiarity with drugs; i.e., whether they knew any drug users, whether they had ever been offered a drug, and whether they had ever taken a drug. Pupils were asked to evaluate the pleasurableness, addictiveness, and dangerousness of cigarettes, cannabis, sedative pills, LSD, heroin, and stimulant pills. Pupils were also asked to choose the three most likely reasons for which people would or would not take drugs.

RESULTS

Regarding familiarity with drugs, 58% of the respondents said they did not know any drug takers, and 42% said they knew one or more. Of those who knew a user, 10% had taken a drug at some time, and another 12% had refused a drug at some time.

Expressed expectations of pleasure following use of any substance were fairly low. Even among those who had used a drug (mostly cannabis), only one in two pupils said they would expect cannabis to be "pleasant." The more contact the pupil had with illegal drugs, the more likely he or she was to express an expectation that use of any substance would be pleasant rather than unpleasant. There was a progressive increase in expectations of pleasure from the no-contact group (3%), through the pupils who knew a user (11%), through those who had been offered and refused (15%), to the ever-users (17%). This suggests that the tendency to report expectations of pleasure was related to degree of familarity with drug takers and drugs rather than to personal experience of drug effects.

The greater the pupils' familiarity with an illegal drug or drugs, the more likely they were to say that they would certainly expect to become addicted to cigarettes (21% of ever-users as opposed to 7% of the no-contact group). The more familiarity pupils had with illegal drugs, the less dangerous they felt cannabis to be. Of ever-users, 60% said that cannabis was "fairly harmless" or "not very dangerous," as opposed to only 5% of the no-contact group. The four familiarity groups did not differ consistently in their evaluations of dangerousness of drugs other than cannabis. Between 30 and 45% of all the groups believed LSD could kill; few pupils believed that cigarettes (9-14% of each group) and sedatives (13-19% of each group) could kill.

While enjoyment was given as one of the three reasons for taking drugs by half of the ever-users, it was given by a quarter or less of other pupils. "To see what it is like" was given almost as often by ever-users and by all other pupils. "Can't cope with life" was given by only a quarter of the ever-users but more often by other students (40-47%). Therefore, the ever-users stressed the pleasure aspects of drug use, while the other pupils more often cited inability to cope with life. Ever-users more often cited "expense" and "unpleasant effects" as reasons for not taking drugs, while other students more often cited "don't want to ruin life."

CONCLUSIONS

The data show that when asked to formulate and report expectations of drug effects and rationales for and against use, those pupils with personal experience of drugs tend to focus on immediate pleasurable/unpleasurable effects, while those who have less or no familiarity with drugs and drug takers tend to focus on inability to cope and on longer-term consequences. On the other hand, students who have taken an illegal drug in the past are also more likely than the students who are less familiar with drugs to report expectations of certain addiction to cigarettes. No clear conclusions can be drawn. It cannot simply be said that ever-users of illegal drugs have an overall tendency to "whitewash" their actions--they are softer on cannabis but harder on nicotine than other pupils. It does appear that respondents tend to attribute to themselves (and to others) attitudes that "fit" or make sense of their social behavior and experience. Attaining any particular position in the drug use continuum is the result of a number of "transitional processes," from not knowing a user, to coming to know a user, to being offered the substance, to accepting an offer. These steps may span many years or occur within a minute. Understanding of the transitions cannot be based on current attitudes, since these attitudes may largely be shaped by the need to make sense of the present situation.

Ebel, H.C.; Katz, David; and Rosen, Allen. Effect of a marijuana drug-education program: Comparison of faculty-elicited and student-elicited data. Journal of Drug Education, 5(1): 77-85, 1975.

DRUG	Marihuana
SAMPLE SIZE	300
SAMPLE TYPE	High School Students
AGE	Adolescents (range: 14-16 years)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	5

PURPOSE

In terms of the general relationship between attitudes and behavior, educators consider attitude modification a necessary prerequisite to the improvement of health behavior. With regard to the specific relationship between attitudes and drug usage, there are indications that some specific types of attitudes are more apt to lead a person to take drugs. A study was conducted to determine: (1) the relationship between expressed attitudes toward marihuana and its apparent usage; (2) the extent of shifts in attitudes and usage as a function of participation in a drug education course; and (3) the validity of the present system of measurement of attitudes through a comparison of data elicited by other students with those elicited by faculty.

METHODOLOGY

Subjects were 300 male students in a vocational high school located in an impoverished socioeconomic area of New York City. Ages of students ranged from 14 to 16 years. Subjects were divided into two groups: those enrolled in a health-education program participated in a 4-week drug education course; those enrolled in an art-education program served as controls and participated in an art-education course during the 4-week period. All students were admininistered a drug-usage and attitude questionnaire before and after taking the courses. The pretests and posttests were compared, and the comparisons contrasted with those obtained from the control group during the control art-education course. The tests were administered under one of two conditions: (1) by the individual teachers (TEA) in the control group and in four of the drug groups; and (2) by a well-known and popular student (STU) in two of the drug groups.

RESULTS

Overall precourse comparisons of attitude and usage indicated that those drugs with a higher percentage of student usage were considered to be safer than those with a lower percentage of usage (significant at the p<.01 level). Beer, which had the most frequent usage (70% reported at least occasional use) was also considered the safest drug (52% of the students reported it as "safe"). Marihuana usage (20%) was associated with an equivalent level (24%) regarding it as safe.

Among students taking the drug course, precourse STU scores indicated that 28% of the students considered marihuana "unsafe," and 48% indicated "not sure," while postcourse STU scores showed significant (p<.01) reversal (49% "unsafe," 23% "not sure"). Reports elicited by teachers (TEA) also showed a significant (p<.01) response shift; 65% of the students reported marihuana "unsafe" in the precourse survey, while 51% called it unsafe in the postcourse survey. At the same time, TEA scores indicated that 15% of the students reported marihuana safe before the course and 26% said it was safe after the course. This shift was associated with a reduction in the proportion of students reporting "never used," and an increase in those reporting seldom or frequent use.

Regarding methodology of testing students, while STU and TEA score distributions differed significantly (p<.01) in the precourse testing, there were no differences in the postcourse scores; in fact, postcourse scores for the TEA and STU groups were virtually identical. Within the STU group, 81% of the precourse-to-postcourse changes were accounted for by attitudinal shifts within the "never-used" student group only. Those who never used the drug were most influenced and the shift in attitude suggests that the drug course convinced nonusers, previously unsure about drug safety, that marihuana was unsafe. In the TEA group, 82% of the change between precourse and postcourse scores was accounted for by changes in usage patterns, whereby more students reported "never-used" at the beginning than at the end of the course (77% and 66%, respectively). These results indicate either that a real increase in usage occurred, or that there was an increase in acknowledgement of a prior existing state of usage. Precourse scores for the control group were not significatnly different from those for the drug group. However, unlike the drug groups, postcourse test scores showed no change from precourse levels, thus confirming that the drug education course did have an effect on attitude change.

CONCLUSIONS

Adjustments in declared attitudes were noted during the period concurrent with a drug education course, especially among those students originally expressing an "unsure-of-safety" attitude. Specifically, nonusers with precourse reports of "not sure" responded "unsafe" in the postcourse survey. Similarly, users reporting precourse "not sure" in the precourse testing shifted to "safe" in the postcourse survey. Of interest was that the user discrepancies occurred only in the case of precourse attitude reports to teachers. Nonuser discrepancies were offered predominantly in precourse reports to student peers. Thus, drug users presented initially disguised behavior to teachers; drug nonusers presented disguised behavior to students. This attitude behavior dissonance was subsequently resolved during the time period of the drug course, by the postcourse acknowledgement of use to teachers and the acknowledgement of feelings of "unsafe" to fellow students.

Hart, Larry. Attitudes regarding drug abuse among a group of ex-addict staff members. International Journal of the Addictions, 11(1):35-39, 1976.

DRUG	Opiates
SAMPLE SIZE	24
SAMPLE TYPE	Ex-addicts
AGE	Not Specified
SEX	13 Male; 11 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New England
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

PURPOSE

While many studies deal with the abuse of drugs, few have reported on drug abusers' attitudes toward drug abuse. In order to assess such attitudes, ex-addict staff members of a therapeutic community for the rehabilitation of narcotic addicts were surveyed.

METHODOLOGY

Subjects were 24 ex-addicts, 13 male and 11 female, who were graduates and staff members at the Marathon House therapeutic communities located throughout New England. Subjects were administered a 44-statement questionnaire originally developed by Marcus (1973) to assess attitudes toward alcoholism. Soverow et al. (1972) adapted the instrument to study attitudes toward drug abuse and the drug abuser. The latter adaptation was used in the present study. After subjects completed the questionnaire, each of the 44 statements was compiled into a group of nine factors. A mean factor score (MFS) was obtained by calculating the mean for each group of the nine factors. The lowest MFS possible was 1; the highest was 7. An ambivalent MFS fell within the range of 3 to 5. If a high score was obtained on factors 1,2,4, and 9, this indicated a "positive" attitude, while a high score on factors 3,5,6,7, and 8 would indicate a "negative" attitude. Scores of males and females were compared.

RESULTS

On factor 1 (emotional difficulties), the males' MFS was 5.17, while the females' MFS was 5.75. This suggested that while both groups were positive in attitude on this issue, the strength of conviction lay with the females. On factor 2 (loss of control), the male staff's MFS was 3.64, while the females scored 3.09. Although both groups were ambivalent, the females' MFS was in a more negative direction. On factor 5 (character defect), males scored 5.42, while females scored 4.55. It appeared that males believed more negatively than females about the character of the addict. On factor 9 (drugs as addiction producing), the males scored 4.19, while the females scored 4.89. While both groups were ambivalent, the females' score was in a more positive direction. The greatest differences between males and females were found on factors 4 and 7. On factor 4 (addict as a steady user), the males scored 5.6, while females scored 3.7. The males were more positive than the females on this periodic-continuous dimension. On factor 7 (drug abuse as an illness), the male staff scored 3.9 and the female staff scored 2.66. The males were ambivalent, while the females were positive on the illness issue.

CONCLUSIONS

Ex-addict staff members believed that emotional difficulties or psychological problems contributed to the development of addiction. The male staff members were negative in their attitude toward the drug abuser's character; they believed that the addict was a weak-willed person. In a positive fashion, the males regarded the addict as one who could be a periodic-excessive user of drugs. Female staff members were positive in their beliefs regarding the addict's prognosis for recovery and that drug abuse was an illness. It appears that staff members were in conflict about several issues. While they believed that emotional difficulties contributed to the development of addiction and that periodic-excessive drug users could be addicts, they were undecided about issues related to the addict's loss of control in his using of drugs, harmless voluntary indulgence, and drugs as highly addicting substances. It seems that the area of conflict is related to the respondents' belief and knowledge regarding the physiological and psychological effects of drugs.

Knox, Wilma J. Attitudes of psychologists toward drug abusers. Journal of Clinical Psychology, 32(1):179-188, January 1976.

DRUG	Multi-Drug
SAMPLE SIZE	827
SAMPLE TYPE	Psychologists; Trainees
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1972
NO. OF REFERENCES	27

PURPOSE

In response to widespread and increasing drug abuse, the number of drug treatment centers is increasing; however, studies of professionals' attitudes toward drug abusers are rare. Included in this treatment center increase is the number of Veterans Administration Drug Treatment Centers, which increased from 5 to 32 in the period 1971-1975. An attempt was made to evaluate the attitudes of psychologists employed or being trained by the VA toward drug abusers.

METHODOLOGY

A questionnaire on drug abuse and its causes, recommended treatments, treatment settings and prognosis, and personal commitment to treating drug abusers, was adapted from a previous one used to obtain attitudes toward alcoholism (Knox, 1974). The sample included 653 full-time staff psychologists and 174 trainees, all employed by the VA. The first part of the questionnaire consisted of six questions to be answered by checking as many answers as the respondent agreed with; the second part consisted of 17 items permitting only one answer. The data were contrasted with attitudes toward alcoholism obtained in an earlier study (Knox, 1969).

RESULTS

Over 80% of the respondents defined a drug abuser as a regular user of heroin, amphetamines, barbiturates, cocaine, and LSD in that order. Only 35.1% included marihuana as a source of drug abuse. As possible causes of drug abuse, 78% chose peer group pressure; 66% cultural pressures; 61.4% anxiety; 61.4% low tension tolerance; 54.1% identity crisis; and 53.6% poorly restrained impulses. Deviant interactions with parents were not seen as leading causes.

Of 12 choices of treatment, 58.3% chose therapeutic community, 54.5% chose synthetic narcotic (such as methadone), and 51.8% selected group psychotherapy as effective with opiate abusers. Treatment environments favored for heroin were special hospital (49.8%), NP (neuropsychiatric) hospital with homogeneous patient groups (45.7%), and outpatient care (37.6%). Recommendations for LSD and alcohol were outpatient care, special hospitals or open-ward care, and homogenous patient groups in an NP hospital. Outpatient care was greatly preferred for marihuana, and use of communes endorsed by 23.8%. Prison was rarely selected as a treatment environment. The lowest number of prison selections was made for marihuana abuse, and the highest for heroin abusers. The prison system was preferred to hospital for drug abusers in these cases: drug use plus criminal activity (selected by 56.4%); drug use plus "pushing" (by 37.9%); under no circumstances (by 29.6%). The respondents had no marked enthusiasm for providing financial benefits for those unable to work because of drug abuse.

The psychologists agreed that: (1) high motivation on the part of drug abusers for hospital treatment is important for treatment success (93.6%); (2) drug abusers temporarily decrease drug use after hospital treatment (87.3%); (3) the prognosis for drug abusers remaining free of drug use is poor (83.6%); (4) a drug abuser cannot return to occasional drug use without creating further problems (77.3%); and (5) treatment should be considered successful when the hard narcotic user switches to a milder drug such as marihuana (71.3%). The respondents disagreed with the following: (1) drug abusers readily seek treatment when it is recommended (82%); (2) it is unethical to treat users of hard narcotics with another addicting drug such as methadone (79.8%); and (3) drug abusers readily acknowledge their own personal need for treatment (66.9%). Further, the greatest number of respondents considered 50% of drug abusers to also be pushers. Most respondents said they would be willing to devote 25% of their time to treatment of drug abusers. The respondent's general reaction to the question of treatment in his own practice indicated that 46.6% would refer within the VA.

Within the group of staff psychologists surveyed in 1972, 233 had been questioned in 1966 about alcoholism, and group attitudes could be compared on certain questions. Attitudes toward treatment modalities and financial benefits correlated highly between the two groups ($p<.01$). Significant agreement ($p<.01$) was also obtained regarding pessimism toward both alcoholics' and drug abusers' ability to cease abuse after hospital treatment, and a generally poor prognosis for both types of abusers. On both occasions, respondents agreed that an alcoholic or drug abuser could not return to occasional use of the intoxicant without it creating further problems ($p<.05$). Motivation for hospital treatment was considered highly important to treatment success for both groups ($p<.01$), and it was agreed that either type of known abuser should be taken to a hospital rather than to jail. Reactions to the assumption of definitive notification that one's present position would be devoted entirely to the treatment of alcoholics or drug abusers showed significant agreement ($p<.01$), and agreement was high ($p<.05$) between the maximum time to be devoted willingly to the treatment of alcoholics and the maximum time for drug abusers.

Overall, the 1966 group was more likely to select closed-ward care for any type of abuse. The 1972 group and trainees were more likely to select outpatient treatment, open wards and a commune for marihuana. Marihuana was ranked sixth by every group as a cause of drug abuse, but more of the 1966 group considered it a source of drug abuse. Trainees were more likely than the other groups to react positively if definitive notification were received that one's present position was to be devoted primarily to the treatment of drug abuse ($p<.02$). They were also the least willing to incarcerate the drug abuser in either an NP hospital or jail.

CONCLUSIONS

Age differences among groups may account for many differences in attitude, especially toward marihuana. However, in this study age and professional experience were confounded, and no remedy for the confounding was immediately apparent. One thing is clear, however, and that is that there is an underutilization of the helping elements potentially available within the profession of psychology for amelioration of drug abuse. Drug use should be viewed as consumer behavior. If the techniques of the consumer psychologist were combined with the motivation for research of the university psychologist and the clinical psychologist's desire to help, a significant social contribution could result.

McPeek, Robert W., and Edwards, John D. Expectancy disconfirmation and attitude change. Journal of Social Psychology, 96:193-208, 1975.

DRUG	Marihuana
SAMPLE SIZE	85
SAMPLE TYPE	College Students
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Experimental
DATA COLLECTION INSTRUMENT	Interviews; Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	30

PURPOSE

An experiment was conducted to test the hypothesis that sources delivering unexpected communications (long-haired males arguing against marihuana usage and seminarians arguing in its favor) would be more persuasive than communicators of expected messages (promarihuana hippies and antimarihuana seminarians).

METHODOLOGY

Subjects were 85 students at Loyola University in Chicago. Direction of communication (promarihuana versus antimarihuana) and type of communicator (hippie, seminarian, or unseen) were varied in a 2 X 3 factorial design. In addition, there was a no-communication control group. The dependent variables were pretreatment and posttreatment attitude measures and postinterview ratings of the communicator. Students were assigned to cells in such a way that the communication they heard was opposed to their initial opinion about marihuana.

Counterattitudinal messages were presented via a tape-recorded interview. The two tapes (one promarihuana and one antimarihuana) were made to sound like actual spontaneous interviews taking place in another room. Subjects were introduced to a communicator (a hippie or seminarian) and were told that the experiment they were to participate in required two roles; the experimenter conducted a rigged drawing so that the subjects were always assigned the role of listener. The subjects were told to listen-in (overhear) as the communicator was being interviewed in another room. The procedure for subjects in the unseen-communicator conditions were similar, except they did not see the communicator and just listened to the discrepant message. After listening to the counterattitudinal messages, the subjects were administered a posttreatment attitudinal scale to gain information about the success of the experimental manipulation, and the prejudices and stereotypes of the subjects concerning marihuana usage and users. Control subjects received no attitudinal message, but simply filled out the pretests and posttests on their attitudes toward marihuana.

RESULTS

Comparison #1 compared the cell means for the hippie-antimarihuana communicator with the combined means for the seminarian-anti and unseen-anti conditions; comparison #2 contrasted the cell mean for the seminarian-pro condition against the combined means for the hippie-pro and unseen-pro conditions. As predicted, comparison #1 was significant ($p<.05$), with the antimarihuana hippie communicator (unexpected condition) being more effective in changing attitudes than the other two antimarihuana communicators. Contrary to prediction, however, the unexpected communicator of the pro message (the seminarian) did not elicit significantly greater attitude change than the hippie-pro or unseen-pro communicators.

Ratings of sincerity, honesty, and convincingness were predicted to be higher in expectancy disconfirmation conditions, and this hypothesis was confirmed for the sincerity and honesty ratings. Comparisons #1 and #2 were significant for both of these items ($p<.05$ and $p<.01$, respectively, for the sincerity comparisons; $p<.05$ for the honesty contrasts). In each case, the ratings for unexpected communicators were higher than those for expected or unseen sources. The results for convincingness, however, did not confirm the hypothesis.

CONCLUSIONS

The data show some support for the hypothesis that communicators who present unexpected communications are more persuasive than both expected communicators and communicators about whom no expectancies have been formed; however, this result held only for antimarihuana communicators. The failure of the hypothesis to hold for the procommunication may have been attributable to two factors. First, the seminarian's appearance (long hair) and manner may have led subjects to expect a liberal stance instead of the intended conservative antimarihuana position; therefore, use of the seminarian may have resulted in the formation of confusing and quite possibly contradictory expectancies. Second, an antimarihuana stance is more popular than a promarihuana stance both in society at large and among the sample of students. Thus, it is possible that students in the unseen communicator conditions expected the communicator to express an antimarihuana opinion. Expression of a promarihuana stance would then disconfirm this expectation, and the promarihuana unseen communicator would elicit more attitude change, while the antimarihuana communicator would not.

Rathus, Spencer A.; Siegel, Larry J.; and Rathus, Lois A. Attitudes of middle-class heroin abusers towards representatives of the educational system. Adolescence, 11(41):1-6, 1976.

DRUG	Heroin
SAMPLE SIZE	296
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	Male
ETHNICITY	88% White
GEOGRAPHICAL AREA	New Jersey
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	9

PURPOSE

Hundreds of studies have investigated adolescent heroin addicts who largely emanate from ethnic minority groups residing in urban centers. They have been shown to have relatively more negative attitudes towards the educational system and to have performed less well within it. Relatively little has been determined about the middle-class adolescent heroin abuser. A study was conducted in order to determine: (1) the extent and frequency of heroin abuse among predominantly white, suburban high school students; (2) the academic performance of such abusers; (3) their school behavior in general; and (4) their attitudes towards representatives of the educational system.

METHODOLOGY

A sample group of 296 male high school students ranging in age from 14 to 18 was selected at random from 10 high schools in a populous suburban area in Northeast New Jersey. Eighty-eight percent of the students were white. All were either Protestant or Catholic. Information was obtained on the students' frequency of heroin abuse, arrests and adjudications, scholastic achievement, and frequency of various forms of school misconduct. Using a semantic differential instrument, students assessed representatives of the educational system, including teachers, guidance counselors, and school principals.

RESULTS

Of the 296 subjects, 20 (less than 7%) had used heroin in the previous year. Mean usage was 2.7 occasions. Heroin abusers did not differ from nonabusers in terms of race, religion, size of family, or order of birth. Both groups largely came from intact homes. Heroin abusers tended to be younger than nonabusers (16 and 17.3, respectively), but this difference was not statistically significant. Heroin abusers had been arrested and convicted significantly more often than nonabusers, and had significantly more trouble in school. Heroin abusers "talked back" to teachers, cut school, were late to school, and cut classes more frequently. However, there were no significant differences between the two groups in academic achievement.

No significant differences were found in the attitudes of heroin abusers and nonabusers toward teachers and school principals. However, heroin abusers did differ in their attitude toward guidance counselors. The counselors were rated significantly more negatively on 4 of 7 variables; they were seen as less "cool," nice, fair, and honest.

CONCLUSIONS

The human suffering that has been associated with heroin abuse may have led well-meaning and, perhaps, generally well-educated counselors to exaggerate the physical dangers involved in heroin abuse. The student who has experimented with heroin knows how it affected him, and he will find unfair, dishonest, and probably naive the counselor who presents an inaccurate picture of such use. Not one of the 20 heroin abusers in this study had taken enough heroin to become physically dependent. Although they had conflicts both in the school setting and with the criminal justice system, their grades had not suffered significantly. It is not surprising that such adolescents might find those presenting them with tales of horror about heroin abuse to be exaggerating.

Schaps, Eric; Sanders, Clinton R.; and Hughes, Patrick H. Student preferences on the design of drug education programs: Drug users and non-users compared. Journal of Psychedelic Drugs, 6(4):425-434, 1974.

DRUG	Multi-Drug
SAMPLE SIZE	13,603
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	Both Sexes
ETHNICITY	Predominantly White
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	December 1970
NO. OF REFERENCES	15

PURPOSE

Informational drug education has been severely criticized as a drug abuse prevention strategy. Several studies have suggested that informational education produces no significant deterrent effect. Although there has been widespread reliance on school-based drug education as a prevention strategy, relatively little attention has been given to the opinions and desires of students, the "consumers" of these prevention efforts. In order to obtain such opinions, a group of Chicago high school students were surveyed regarding their personal drug use and their ideas concerning the design of drug informational programs.

METHODOLOGY

The survey was conducted in six high schools in the Chicago area. The 14,020 students surveyed were predominantly white, suburban, and from the middle and upper classes. Of the questionnaires received, 13,603 were used for data analysis purposes. Subjects were classified according to the type and variety of drugs they reported using during the three months prior to the study. Nonusers (55.8% of the sample) used none of the drugs surveyed. Alcohol users (24.2%) used only alcohol "to get high." Marihuana users (7.9%) used only marihuana, or marihuana and alcohol. The light polydrug users (4%) used any one of four drugs--tranquilizers, psychedelics, amphetamines, barbiturates--alone or in addition to marihuana and/or alcohol. Heavy polydrug users (4.6%) used any two, three, or all four of the drug types. Opiate users (3.5%) used opiates only or opiates plus any of the previously mentioned drugs.

RESULTS

An overwhelming majority of students expressed at least some interest in the topic of drugs and drug use; more than 74% were "very" or "fairly" interested. This interest was consistent across year in school, sex, class, and degree of drug involvement. Nonusers were only slightly less interested than drug users. Asked what type of information they were interested in, students showed the greatest interest in the psychological consequences of drug use (nearly half of the respondents). This preference was consistent across all drug categories, as was the tendency to select the next preferred alternative, physiological consequences. Interest in legal information increased significantly with involvement in drug use. Opiate users chose this topic 3 times more frequently (14.9%) than nonusers (5.5%). Nonusers and alcohol users were somewhat more interested in counseling information than users of illicit drugs. When asked whom they would go to for help with a problem, drug users more often showed a preference for siblings, friends, and ex-users as the best sources of help. Nonusers preferred adult and professional sources of help.

Of the 61% who reported some exposure to school drug education programs, 24% said most of their important questions had been satisfactorily answered, 37% said "some" had been answered, 21% checked "few," and 18% checked "none." School programs were regarded most favorably by those least involved in drugs. Drug users were twice as likely as nonusers to say the programs had answered "few" or "none" of their important questions. When asked who should be involved in the setting up of drug education programs, 65% of the respondents chose "students, drug users and nonusers both" above "teachers" (0.9%), "counselors" (1%), "parents" (0.7%), and "experts on drugs" (25.5%). Nonusers selected the student choice nearly as frequently as did heavy polydrug users and opiate users (61.9%, 75.5%, and 72.2%, respectively). Regarding program setting, drug users nearly twice as frequently (41%) as nonusers (22%) favored informal meetings during school, whereas the latter favored regular classes (32% vs. 21%). Regarding staffing of the programs, nonusers said clinical or research professionals were the best source of information on psychological and physiological effects, whereas users preferred "ex-addicts" and "students with extensive drug experience." The police were almost ignored as top informational sources by both users and nonusers.

CONCLUSIONS

Where primary prevention is the goal, informational programs will be seriously limited to the extent that these programs are staffed exclusively by teachers, counselors, and policemen. Where secondary prevention is concerned, the influence of such programs will probably be nonexistent. Only when information is presented by individuals whom students perceive as knowledgeable and credible are these programs likely to have substantial effects on drug use behaviors. Positive effects will be most likely where participants meet in informal, discussion-oriented groups, where emphasis is placed on psychological dimensions of use, and where the students have a major voice in organizing the program.

Stenmark, David E.; Kinder, Bill N.; and Milne, Larry D. Drug-related attitudes and knowledge of pharmacy students and college undergraduates. International Journal of the Addictions, 12(1):153-160, 1977.

DRUG	Multi-Drug
SAMPLE SIZE	241
SAMPLE TYPE	College Students
AGE	Adults (mean 21)
SEX	132 Male; 109 Female
ETHNICITY	230 White; 11 Nonwhite
GEOGRAPHICAL AREA	South Carolina
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1973 - 1974 Academic Year
NO. OF REFERENCES	14

PURPOSE

There has been an increase in drug education programs in the past few years because of the growing concern about drug abuse problems in the U.S. However, as yet, the overall utility of these programs remains in question. It appears that the programs increase the participants' factual knowledge, but have little or no measurable effects on attitudes or behavior. A study was conducted to determine if a long-term and intensive drug-related educational program for pharmacy students would have any measurable effects on drug-related attitudes or knowledge.

METHODOLOGY

Subjects were second- and fourth-year undergraduate and pharmacy students at the University of South Carolina during the 1973-74 academic year. Of the 241 subjects, 132 were male and 109 were female; their mean age was 21; and most were white (95%). The students were asked to fill out two questionnaires, one on their attitudes toward drugs and one on their factual knowledge regarding drugs. The following substances were included: alcohol, heroin, tobacco, barbiturates, amphetamines, LSD, and marihuana. Attitudes were measured on a 5-point scale in terms of the degree of legal control the respondents felt was appropriate for each substance. Knowledge questions generally dealt with pharmacological, physiological, psychological, and addictive aspects of the substances. The students had been exposed to several years of drug education.

RESULTS

In comparing second-year versus fourth-year pharmacy students, there were no significant differences in attitudes on any of the substances evaluated. Although there was a trend for the fourth-year students to have more factual knowledge than their second-year counterparts, this difference was not statistically significant. When the second-year pharmacy students were compared to the undergraduates, the only significant attitude difference was with regard to alcohol ($p<.03$), with the pharmacy students having more lenient attitudes regarding alcohol than the undergraduates. The pharmacy students had more factual knowledge than the undergraduates concerning all substances evaluated, with the differences being significant for amphetamines and barbiturates ($p<.004$), tobacco ($p<.005$), and alcohol ($p<.007$). Again, pharmacy students had more factual knowledge of all substances, with the differences being significant for heroin ($p<.001$) and alcohol ($p<.001$). Generally there was a trend for factual knowledge to increase with age and years of education, and for females to hold more conservative attitudes than males, but none of these comparisons was statistically significant.

CONCLUSIONS

While drug-related education did appear to increase factual knowledge, it had few effects upon attitudes. For the few attitudinal differences that were significant, the drug-related education resulted in more lenient attitudes in all instances. Many programs have been criticized for being too short in duration, and it has been hypothesized that courses of longer duration would have more impact. This hypothesis was not confirmed by the present evaluation because the students had undergone several years of drug education.

Traub, Stuart H. Perceptions of marijuana and its effects: A comparison of users and nonusers. British Journal of Addiction, 72(1):67-74, 1977.

DRUG	Marihuana
SAMPLE SIZE	177
SAMPLE TYPE	College Students
AGE	Adolescents; Adults (range 17-24)
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Oklahoma
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	11

PURPOSE

The general public in the United States is exposed to a great volume of information regarding marihuana, particularly through the mass media. Because of this information, and because increasing numbers of people are using marihuana, both users and nonusers of marihuana ought to be knowledgeable concerning the effects of marihuana. While much research has focused on the marihuana user, little study has been done on the marihuana nonuser's perception of various factors related to the use of marihuana. The purpose of this study was to examine whether and to what extent users and nonusers of marihuana have similar perceptions of the effects of marihuana.

METHODOLOGY

A total of 100 self-reported marihuana users and 77 nonusers were included in the study. All subjects were students at a large state university in Oklahoma; their ages ranged from 17 to 24, with the greatest concentration in the 19-20 age category. Subjects completed questionnaires designed to elicit: (1) demographic information; (2) frequency of marihuana use; (3) other drugs used; (4) sources perceived to be influential in the decision to use and discontinue using marihuana; (5) perceived motivation in the use of marihuana; and (6) knowledge of specified behavioral patterns and experienced effects of a marihuana high.

RESULTS

There were almost three times as many males as females in both the user and nonuser groups. Eighty-two percent of the users and 92% of the nonusers were single; 65% of the users and 70% of the nonusers were in their sophomore or junior year in college; and two-thirds of both groups were majoring in the social and behavioral sciences. Regarding residence, 73% of the users and 81% of the nonusers resided on campus, indicating that marihuana use was not an off-campus subcultural phenomenon.

Of the users, 1% said they used marihuana about every day, 22% said they used it once a week or more, 72% said they used it at least once a month but less than once a week, and 5% said they had used it only once in the past six months. Users said they also had used other illicit drugs, particularly LSD, amphetamines, quaaludes, mescaline, barbiturates, and tranquilizers. The nonusers had used tranquilizers, amphetamines, and barbiturates. Users perceived peer influence to be the most important variable related to their decision to use marihuana. Nonusers also perceived peer influence to be the most important variable in one's decision to use marihuana. Both users and nonusers perceived the mass media as being the most influential variable in the users' decision to discontinue marihuana use. Users and nonusers were presented with a checklist of 15 reasons why persons might smoke marihuana. Both users and nonusers (71% and 61%, respectively) perceived pleasure as the most important reason for using marihuana. The only item of relative disagreement between users and nonusers pertained to the importance of peer pressure in one's decision to use marihuana; nonusers perceived peer pressure to be a more important motivation for use of the drug than did marihuana users (14% vs. 4%).

Users usually shared marihuana with other users, although they did not perceive themselves as "needing" to be with others when smoking marihuana. Nonusers were aware of the sharing aspect of marihuana use, but they did not consider it to occur as frequently as did users. Nonusers also felt that users needed to be with other users and preferred to interact with other users when smoking. Users said they became hungrier; that their sensitivity to taste, sound, and touch increased; that their ability to concentrate and comprehend usually increased; that time passed more slowly; and that sex was more enjoyable when they smoked marihuana. Nonusers were generally not cognizant of the extent to which these sensations were perceived to occur among users, although they did perceive an increase in the users' sensitivity to taste, sound, and touch.

CONCLUSIONS

The prevailing notion that the student marihuana user is a member of a distinctive subculture characterized by specific demographic variables is not supported by the data. The findings do indicate that both marihuana users and nonusers have extensive experience with drugs. As noted by Blum et al. (1969), this is an indication that multiple drug use is not limited to marihuana users. In general, users and nonusers were found to be in relative agreement with regard to their perceptions of sources influential in initiating marihuana use, and in their perceptions of motivating factors important in its use. The major area of disagreement between users and nonusers concerned their perceptions of behavior patterns of marihuana-intoxicated persons, as well as the effects experienced when high. Users' perceptions of the effects of being high were consistent with those found in other studies; nonusers, however, appeared to be relatively naive concerning the major effects of a marihuana high.

Personality

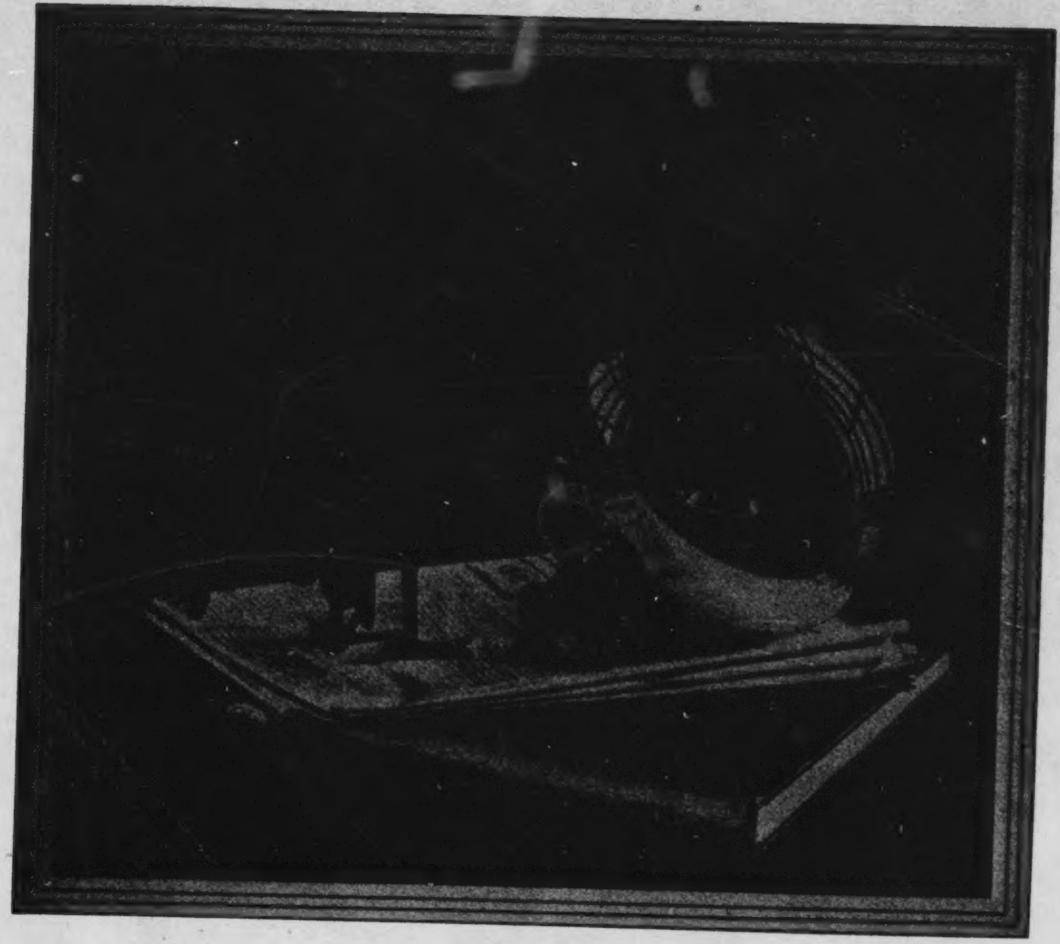

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Illustration:

Still Life With Reflecting Sphere
M.C. Escher
Print Purchase Fund
National Gallery of Art, Washington, D.C.

Arnon, Dan; Kleinman, Marc; and Kissin, Benjamin. Psychological differentiation in heroin addicts. International Journal of the Addictions, 9(1):151-159, 1974.

DRUG	Opiates
SAMPLE SIZE	61
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults (mean 28)
SEX	30 Male; 31 Female
ETHNICITY	Black; White; Puerto Rican
GEOGRAPHICAL AREA	Brooklyn, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Portable Rod and Frame Test
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	19

PURPOSE

Throughout the literature there is a divergence of opinion on the underlying personality structure leading to addiction. Witkin et al. (1959) and Karp (1963, 1965) have applied the easily quantifiable perceptual function of field dependence to investigations of personality in alcoholics. Field-dependent and field-independent cognitive style are associated with separate clusters of personality characteristics. Field-dependent individuals depend on their surrounding environment for structure and support. They have difficulty in dealing analytically with the world around them and characteristically react to it in a passive manner. Field independence, on the other hand, is associated with the ability to separate oneself from the environment and to deal with it in a more critical and analytic way. Field-independent persons are characterized by activity and independence, higher self-esteem, and a more mature body image. Studies of alcoholics have demonstrated that alcoholics of all types are significantly more field-dependent than normal controls. In order to test the field dependence of heroin addicts, patients in a methadone maintenance clinic at Kings County Hospital Center in Brooklyn, New York, were studied.

METHODOLOGY

Thirty male and 31 female heroin addicts were tested with Oltman's portable modification of Witkin's Rod and Frame Test. The task of each subject was to align a rod to the vertical position when the frame in which the rod is placed was tilted at an angle of 28 degrees to the right or left of the subject, in the absence of other visual cues. Each subject was given eight trials. The subject's score was the sum of the deviations from the vertical measured in degrees for all eight trials. Scores were compared using T- and F-tests to data obtained by Oltman (1968) for normal subjects.

RESULTS

The total addict group, including male and female subjects, was significantly more field-dependent than Oltman's normal subjects (p<.001). A comparison of male and female addicts revealed that the females were significantly more field-dependent than the males (p<.001). Female addicts were found to be significantly more field-dependent than female normals (p<.001). No significant difference was found between male addicts and normal males, however. A comparison of the distributions of addicts and normal subjects' test scores revealed a bimodal distribution for addicts, with peaks in the field-dependent and field-independent range. In contrast, the normative sample had a unimodal distribution, with its peak in the field-independent range.

CONCLUSIONS

The data suggest that a unitary concept of the addictive personality, while perhaps valid for most alcoholics, is not valid for heroin addicts. The addicts studied showed greater variability in field dependence. The distribution of their scores appeared bimodal, with subjects concentrated at the extremes of the spectrum. This is in marked contrast to alcoholics, among whom field-independent subjects are rare. This finding is also in contrast to Oltman's normal subjects. There was also a marked difference between males and females, with females testing closer to alcoholics than male addicts. It may well be that the psychoanalytic concepts of the addictive personality are valid for women but not, in general, for men. In addition, peer group pressure to experiment with drugs may affect men more than women, while women tend to take drugs to resolve intrapsychic conflict.

The wide variations in psychological differentiation in addicts, with concomitant differences in character structure and psychopathology, lend further support to the need for a multimodality approach to the treatment of heroin addiction.

Carman, Roderick S. Internal-external control and drug use among junior high school students in a rural community. International Journal of the Addictions, 12(1):53-64, 1977.

DRUG	Multi-Drug
SAMPLE SIZE	40
SAMPLE TYPE	Junior High Students
AGE	Adolescents (mean 13.9)
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Wyoming
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	8

PURPOSE

Although the initiation and socialization of drug use during early adolescence appears to be receiving increased attention, very little empirical research has been performed. In order to determine the etiology of adolescent drug use, a study was made of junior high school students in a rural community in Wyoming. It was hypothesized that the students who reported a greater belief in external locus of control would, if they were drug users, also report more problematic use patterns.

METHODOLOGY

In the fall of 1973, questionnaire scales designed to assess internal-external locus of control and current drug use were administered to 215 junior high school students in grades 7-9. Since the study focused on the drug-using population of the school, the 40 students who indicated that they had engaged in some form of drug use were utilized as subjects. To measure internal-external locus of control, a forced-choice scale consisting of 26 items was adopted from a previous study of deviance and alienation in a rural community (Jessor et al., 1968). For each item subjects were to choose one of two statements which reflected their own views; one statement reflected a belief in internal control, and one a belief in external control. Statements reflecting a belief in internal control were assigned a "2," while external control statements were assigned a "1". Thus a higher score signified greater internal control. A drug-use questionnaire was also administered, which obtained information on drug-use frequency and the amount of trouble experienced with family, friends, or authorities because of drugs. The higher the score, the greater the frequency of drug use and social complications.

RESULTS

Marihuana was used with the greatest quantity and frequency, followed by amphetamines, barbiturates, and hallucinogens. In comparison with high school students previously studied in a rural community in Washington (Carman, 1973), the quantity-frequency figures for the junior high school students fell somewhere around half that for the high school students. The junior high students also reported being "high" at something more than half the frequency of the high school students; however, they reported somewhat more social complications.

In order to test the hypothesis concerning locus of control and drug use, product-moment coefficients of correlation were calculated between the internal-external control variables and the drug variables. Since it was predicted external control would co-vary with increased quantity-frequency, times "high," and social complications, it was anticipated that all of the correlations would be negative in direction, and this was the case. Although all correlations were in the predicted direction, only those involving quantity and frequency of marihuana use, barbiturate use (both at $p<.01$), and hallucinogen use ($p<.05$) were statistically significant. Number of times "high" and number of social complications were not significantly correlated with locus of control.

CONCLUSIONS

Even though some evidence in support of the hypothesis was found, conclusions must remain very tentative. Correlations obtained, although all were in the expected direction and some were statistically significant, were of modest magnitude, and it is clear that important factors other than locus of control are at work in determining the nature and origins of drug use among adolescents. It may be, however, that attitudes toward personal locus of control reflect some set of characteristics having to do with perceived competence or power to influence one's own fate which is important in shaping a repertoire of drug-using behavior.

Cryns, Arthur. Personality characteristics of heroin addicts in a methadone treatment program: An exploratory study. International Journal of the Addictions, 9(2):255-266, 1974.

DRUG	Opiates
SAMPLE SIZE	81
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults (range 18-51)
SEX	58 Male; 23 Female
ETHNICITY	46 Black; 35 White
GEOGRAPHICAL AREA	Buffalo, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Shostrom Personal Orientation Inventory
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	19

PURPOSE

There have been only a limited number of data-based studies on the personality attributes of drug addicts. Moreover, most of the published research gives evidence of having been predominantly clinical in orientation, and thus of having been one-sidedly geared to the discovery of pathological symptomatology in the addict. Only recently have studies been conducted which focus on the normal psychological as well as the psychiatric attributes of the addict. This investigation probed the psychodynamics of the drug-addicted individual utilizing normal rather than clinical measures of inquiry. Specific questions dealt with include: Does the heroin addict submitting to methadone treatment differ significantly from similar addicts seeking no such treatment? Does methadone treatment, as such, effect changes in addict self-assessment over time? Do such subject variables as race and sex relate with any degree of consistency to obtained personality measures? Does psychotherapy or counseling provided in conjunction with methadone treatment significantly affect addict self-perception?

METHODOLOGY

The sample consisted of 70 heroin addicts participating in a methadone maintenance program at a large metropolitan hospital in Buffalo, New York. Fifty-one of the subjects were male and 19 were female; 40 were black and 30 were white. Subjects ranged in age from 19 to 51 years, with a median of 28.4 years. Almost all subjects had submitted to methadone treatment voluntarily; only three were court referrals. A small control group (N=11) was included for comparison purposes, consisting of heroin addicts not on a methadone maintenance regime; there were seven males and four females; six were black and five were white; their median age was 25.6 years. These control subjects were recruited from a small community drug counseling clinic where they voluntarily attended "rap sessions" led by a rehabilitated heroin addict.

All subjects were administered the Shostrom Personal Orientation Inventory (POI), which measures positive mental health rather than clinical defect; it is based mainly on Maslow's model of the self-actualizing person. The instrument yields a total of 14 subscale scores: (1) time incompetence (TI)--degree to which person lives in past or future; (2) time competence (TC)--degree to which subject lives in the present; (3) other-directedness (O)--dependency upon others; (4) inner-directedness (I)--degree of personal autonomy; (5) self-actualizing value (SAV)--tendency to prefer values generally held by mature persons; (6) existentiality (Ex)--degree to which person is able to react flexibly to situations; (7) feeling reactivity (FR)--sensitivity to one's own needs and feelings; (8) spontaneity (S)--freedom to be oneself; (9) self-regard (SR)--feelings of self-worth; (10) self-acceptance (SA)--acceptance of self despite weaknesses; (11) nature of man (NC)--degree to which subject views human nature positively or negatively; (12) synergy (SY)--ability to transcend dichotomies; (13) acceptance of aggression (A)--acceptance of one's own natural aggressiveness; and (14) capacity for intimate contact (C)--ability to relate intimately to others.

RESULTS

The data indicated that the methadone treatment group functioned at a higher level of self-actualization and self-perceived maturity than did the addict control group ($p<.001$). In comparison to the control group, the methadone sample scored significantly lower on other-directedness, but higher on existentiality, self-regard, self-acceptance, and acceptance of natural aggressiveness. This suggests the prevalence of a significantly more favorable self-concept among the methadone treatment group subjects than among the control group subjects.

Among methadone patients, women were significantly more sensitive emotionally than men patients (FR scale), and black subjects tended to be less flexible behaviorally than their white counterparts. However, in general, there were no real differences in personality profile between male and female or between black and white addicts. Duration of methadone treatment did not result in significant modifications of self-perception; addicts who had been in methadone treatment for longer than 1 year did not assess themselves fundamentally differently than those with less rehabilitative exposure.

Half of the methadone treatment group was also receiving psychotherapeutic help. The data indicated that those in therapy scored significantly higher on the TI, TC, and S scales. This suggested that the addict in therapy was apt to have a significantly different personal time-perspective (TI, TC) and to manifest a significantly higher level of socioemotional spontaneity (S) and self-worth (SR) than his noncounseled counterpart.

CONCLUSIONS

The data indicated that the larger and most consistent differences in addict self-perception are those between addicts in methadone treatment and addicts receiving no such treatment. The higher maturational level of the methadone treatment group may be due to the fact that most entered treatment voluntarily. This group's commitment to drug rehabilitation, with its intrinsic constraints such as abstinence from illegal drugs, means that this group must necessarily be more resourceful and have more self-esteem than addicts who, at best, are willing to participate in group "raps."

The data also indicated that methadone treatment *per se* does not effect significant changes in addict self-assessment over time. Only psychotherapy in combination with methadone maintenance seems to have the additive capacity of doing so. The policy implications of this finding appear to be clear: effective treatment of the heroin addict requires that he be given the dual rehabilitative experience of being treated for both his addictive condition and for whatever personality problems he may carry with him into the treatment program.

Gasser, Edith S.; Langrod, John; Valdes, Katharine; and Lowinson, Joyce. The Eysenck Personality Inventory with methadone maintenance patients. British Journal of Addiction, 69:85-88, 1974.

DRUG	Opiates
SAMPLE SIZE	73
SAMPLE TYPE	College Students; Treatment (inpatient); Treatment (outpatient)
AGE	Adults
SEX	Both Sexes
ETHNICITY	Black; White; Hispanic
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Eysenck Personality Inventory
DATE(S) CONDUCTED	Not Specified
NO. OF REFEPENCES	5

PURPOSE

Because narcotic addicts depend upon a drug that must be procured illegally, they are forced to engage in socially disapproved activities to acquire it. Social disability is such a prominent characteristic of addiction that it has been widely theorized, and accepted in many quarters, that individuals become addicted to drugs because of underlying psychopathology sometimes vaguely classified as personality deficiencies or character disorders. A study was conducted to explore the possibility that the Eysenck Personality Inventory might be helpful in learning something about the personality of addicts.

METHODOLOGY

The Eysenck Personality Inventory (EPI) was designed to measure two dimensions of personality: extraversion-introversion (E) and neuroticism-stability (N). In addition, it includes a Lie Scale. Three groups were given the EPI, Form A: two groups of former addicts and one group of college students. Group 1 was an inpatient group of 20 new admissions to a methadone maintenance program, who had been in treatment an average of three weeks and were not fully stabilized. There were 16 males and 4 females from 19 to 42 years old; 6 were black, 3 Hispanic, and 11 white. Group 2 consisted of 19 long-term patients who had been on the program and were employed as counselors. Their backgrounds were similar to those of the short-term group. Group 3 contained 34 college students who were predominantly white, 20 to 21 years of age, and male. Data were analyzed for both intragroup and intergroup differences.

RESULTS

There was a strong tendency on the part of the less experienced user to show more neuroticism features. When addicts of nine years or less of heroin use were compared with those of more than sixteen years' use, the difference on the N scale was significant at the .05 level. Thus, the longer-term heroin addict claimed fewer neurotic feelings. No significant differences were noted among any of the three groups. However, the patient group showed a tendency toward higher N scores than the counselor group, and the college group showed a very strong tendency toward a higher Lie score than either of the other two groups.

CONCLUSIONS

This self-report inventory did not differentiate between addicts, ex-addicts, and nonaddicts; nor did it indicate addiction proneness. Thus, as measured by the EPI, former heroin addicts now on methadone maintenance are no more anxious or unable to cope with stress than a group of apparent normals.

Gulas, Ivan, and King, Francis W. On the question of pre-existing personality differences between users and nonusers of drugs. Journal of Psychology, 92:65-69, 1976.

DRUG	Marihuana
SAMPLE SIZE	90
SAMPLE TYPE	College Students
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Hanover, New Hampshire
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Gordon Personal Profile
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	4

PURPOSE

In studies of personality correlates of drug use, the assessment of personality factors after the fact often leads to speculative interpretations of empirical findings. The present study examined personality factors of users (and nonusers) before any of the subjects engaged in drug use behavior.

METHODOLOGY

An extensive questionnaire regarding drug usage was mailed to each senior at Dartmouth College. The questionnaire was returned by 577 students. The returned forms were then placed into three groups: (1) nonusers; (2) light marihuana-only users (used marihuana no more than 20 times); and (3) heavy marihuana users (had used marihuana more than 50 times and currently used at least once a week), who were also experienced in the use of hallucinogens and other controlled drugs. Thirty questionnaires were randomly selected from each group. No subjects were included in the sample who had dated their initial use of any of the relevant drugs prior to college graduation. For each of the subjects, there were available scores from the Gordon Personal Profile taken at the beginning of the subjects' freshman year. The personality variables measured by the instrument were Ascendancy, Responsibility, Emotional Stability, and Sociability. Mean scores on each of these dimensions were plotted for each group of subjects.

RESULTS

Heavy users scored significantly higher on the Ascendancy scale than did nonusers ($p<.05$). On the Responsibility scale, nonusers scored significantly higher than both the marihuana-only ($p<.02$) and the heavy users (pF.003). No significant differences were found between groups on the Emotional Stability or Sociability scales.

CONCLUSIONS

It appears there are determinable personality differences between users and nonusers of marihuana and other drugs prior to the use of the substances. While the Gordon Personal Profile (GPP) does not enjoy the popularity of the MMPI or the California Personality Inventory (CPI), Gordon has reported evidence of some significant relationships between the GPP and the CPI: (1) GGP Ascendancy is significantly related to CPI Self-Acceptance (.69), Social Presence (.49), Sociability (.67), Capacity for Status (.45), and Dominance (.68); and (2) GPP Responsibility is positively related to CPI Self-Control (.37) and Achievement via Conformance (.43), and negatively related to Flexibility (-.43).

Henik, Willy, and Domino, George. Changes in locus of control in heroin addicts. International Journal of the Addictions, 9(6):899-902, 1974.

DRUG	Methadone
SAMPLE SIZE	62
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults (range: 22-36)
SEX	Male
ETHNICITY	White
GEOGRAPHICAL AREA	Bronx, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Rotter's I-E Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	4

PURPOSE

Man's efforts to master his environment have been a focal point of various personality theorists. Perhaps the most explicit statement and the clearest empirical application of this concept was Rotter's (1954, 1966) social learning theory with its emphasis on expectancies for internal versus external control of reinforcement. Using Rotter's I-E Scale, an investigation was conducted in order to determine changes in control expectancies of heroin addicts participating in a methadone maintenance program.

METHODOLOGY

The subjects were 62 male patients participating in a methadone maintenance treatment program at the Narcotic Addiction Unit at Bronx State Hospital. The experimental group consisted of 31 subjects admitted to the program who were: white, male, between 22 and 36 years of age, with at least four years of mainline heroin use, a minimum score of 15 on the Shipley-Hartford Vocabulary Scale, and a score of 31 or below on the Good Impression scale of the California Psychological Inventory. A matched control group of 31 addicts on a waiting list for the same program were included in the study. Both groups were equated on socioeconomic level, marital status, employment history, and criminal background. Using Rotter's I-E Scale, subjects in the experimental group were initially tested within 24 hours of their admission to the program, and retested nine weeks later. Control subjects were also tested twice, nine weeks apart, but prior to their eventual admission into the program. The evaluation of change was based on covariance analysis, with initial scores serving as the covariate.

RESULTS

No significant difference was found between the initial means (experimental mean, 9.29; control, 8.97), but upon retest, the experimental group showed an average decrease of 2.03 points, while the control group mean increased .58--a statistically significant difference ($p<.01$). The prediction that, as a result of the changed realities of life brought about by participation in a methadone program, heroin addicts would show a decrease in external orientation was fully supported.

CONCLUSIONS

The system of impotence in which the addict finds himself and the grave limitations within which he has to function contribute to the extinction of whatever expectations he may have had of achieving desired reinforcements. Whatever else a therapeutic program offers the addict, it does provide him with the means to break the vicious cycle of his past experience. However, the results should neither be taken as supportive of the therapeutic efficacy of methadone maintenance, nor as indicative of more basic alterations in behavior.

Horan, John J.; D'Amico, Mary M.; and Williams, John M. Assertiveness and patterns of drug use: A pilot study. Journal of Drug Education, 5(3):217-221, 1975.

DRUG	Multi-Drug
SAMPLE SIZE	81
SAMPLE TYPE	College Students
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Pennsylvania
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire; Rathus Assertiveness Schedule
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

PURPOSE

Although considerable amounts of data have been collected on the personal and social correlates of deviant drug use, many of the reported conclusions are contradictory or based on inadequate methodology. One of the few exceptions is the finding that personal drug use correlates quite highly with use of drugs by peers. This observation suggests that assertive training could have considerable utility as a drug abuse prevention strategy. Assertive training enables individuals to engage in appropriate behavior previously blocked by the presence of maladaptive anxiety. In order to determine whether assertive training would be useful in the drug abuse prevention field, it was determined to first discover whether drug use and assertiveness were indeed related.

METHODOLOGY

Subjects consisted of 81 junior and senior students at a large university who received academic credit for completing two questionnaires--the Rathus Assertiveness Schedule (RAS), and a drug-use inventory which provided information on the kinds of drugs used by the subjects, and their patterns of use. Three usage patterns were determined: never used, currently used, and formerly used (a category almost entirely composed of experimenters).

RESULTS

Current use of legal drugs (tobacco and alcohol) appeared to be the norm among the students studied. Use of "socially acceptable" illegal drugs, marihuana and hashish, was also quite common, but usually only on an experimental basis. The "harder" illegal drugs (hallucinogens, stimulants, depressants, cocaine, and heroin) were used much less frequently if at all.

Assertiveness and usage patterns of cigarettes and alcohol were not related. However, those who had experimented with but no longer used patent medicines were significantly more assertive ($p<.001$) than both current users and those who never used these kinds of drugs. A similar finding occurred with marihuana and hashish. There was no significant relationship between hard drug use and assertiveness.

CONCLUSIONS

Experimental use of marihuana and hashish among young people may well be the norm. Thus, one might speculate that drug educators ought to retrench and focus their efforts on "abuse" rather than experimental use. To concentrate on the latter appears to be fighting a losing battle with a statistically normal event. Also, those who have experimented with socially acceptable drugs are substantially more assertive than either current users or "never" users. This finding has strong implications for research. Current users of illegal drugs apparently lack a number of assertive skills which could extricate them from social conformity situations leading to drug use. While no causal link can be drawn between low assertiveness and chronic use of drugs, it appears that assertive training holds promise as a drug abuse prevention strategy.

Huba, George J.; Segal, Bernard; and Singer, Jerome L. Organization of needs in male and female drug and alcohol users. Journal of Consulting and Clinical Psychology, 45(1):34-44, 1977.

DRUG	Multi-Drug; Alcohol
SAMPLE SIZE	1,095
SAMPLE TYPE	College Students
AGE	Adults
SEX	498 Male; 597 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New Haven, Connecticut Murray, Kentucky
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Personality Research Form (PRF); Questionnaire
DATE(S) CONDUCTED	1973 - 1974
NO. OF REFERENCES	29

PURPOSE

There have been no empirical attempts to demonstrate that personality organization is qualitatively the same in users of drugs and alcohol as in nonusers of these substances. Nor has there been an attempt to show that the same domains of variables are organized differently in males and females. An investigation was undertaken to study the personality domain of college students using a subset of the basic needs postulated by Murray (1938). Using the Personality Research Form (PRF), the study sought to determine if Murray's needs have a stable organization across individuals differing in pattern of substance use and sex.

METHODOLOGY

A total of 498 male and 597 female students at Yale University and Murray State University were included in the study. The Personality Research Form (PRF) was administered to the students in the fall of 1973 and 1974. The variables analyzed by the PRF were the needs for Achievement, Affiliation, Aggression, Autonomy, Dominance, Endurance, Exhibitionism, Harm-avoidance, Impulsivity, Nurturance, Order, Play, Social Recognition, and Understanding. The subjects also completed a questionnaire about their use of drugs and alcohol. On the basis of their responses, students were placed into four groups: nonusers, users of alcohol only, users of marihuana only, and multidrug users. The PRF was factored for each of the drug groups and for 1973 males, 1973 females, 1974 males, and 1974 females. Six factors were extracted in each analysis: (1) generalized need for group membership; (2) extraversion; (3) generalized tendency to impulsive action; (4) generalized achievement motivation; (5) generalized need for a bohemian lifestyle; and (6) a desire for organized social play. Subgroup factor-pattern matrices were aligned to a common position, and the stability of the factorial solution across groups was assessed.

RESULTS

The results indicated a large amount of factorial stability for the Murray needs measured by the PRF. The dimensions of personality measured by the instrument were qualitatively the same in groups formed by either drug and alcohol use, or sex. Although the six factors were relatively stable, it is interesting to note that four of the factors were more stable than the remaining two. The generalized achievement motivation and playfulness dimensions were qualitatively different for individuals who used neither drugs nor alcohol. Achievement Motivation in the nonusers was intimately related to the needs for Order, Nurturance, and Understanding, and may have represented the expression of achievement needs through socially desirable means. Individuals who used drugs or alcohol were not as likely to express their needs for achievement through socially desirable activities. The expression of playfulness in the nonusers was positively related to the needs for Impulsivity and Order and negatively to the need for Endurance. With these minor exceptions, the factor structure of the PRF was stable across the sexes and across different types of substance users.

CONCLUSIONS

There is very little difference in the way in which motivations are organized in youthful users and nonusers of drugs and alcohol. Similarly, the motivational patterns of young men and women are essentially the same. However, the extent to which the results are generalizable either to the differences that might be obtained by comparing older men and women or by comparing nonusers of drugs and alcohol with chronic users of either substance is not known. This study does demonstrate that moderately and relatively short-term use of a variety of drugs and alcohol is not associated with the reorganization of motivational patterns in a large and reasonably heterogeneous sample of college students.

Huntwork, Dianne, and Ferguson, Leonard W. Drug use and deviation from self-concept norms. Journal of Abnormal Child Psychology, 5(1):53-60, 1977.

DRUG	Multi-Drug
SAMPLE SIZE	2,390
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	1,067 Male; 1,323 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Ohio
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	30

PURPOSE

Several researchers have indicated that the drug user is in some way deviant from his age, sex, school, or other normative group. Using a pair-comparisons test assessing self-concept, a group of high school students in southeastern Ohio was studied. The purpose of the study was to show how the testing device could be made to yield scores indicating deviation from sex-and-grade, self-concept score norms, and to demonstrate the value of such deviation scores as predictors of drug use.

METHODOLOGY

Subjects consisted of 1,067 male and 1,323 female high school students, in grades 9-12, in southeastern Ohio. Each student was asked to answer a questionnaire which obtained information on drug use and self-concept. Each self-concept item consisted of two adjectives; the respondent's task was to indicate which adjective was the more self-descriptive. For each sex-and-grade combination and for each item in the pair-comparisons, the number and the percent of respondents claiming each adjective to be self-descriptive were determined. One adjective of the pair was rated as "normal" and the other as "deviant." The drug-use survey assessed frequency of use of beer, wine, cigarettes, hard liquor, marihuana, speed, and LSD.

RESULTS

The data indicated a clear relationship between the percentage of respondents using a drug, and deviation from one's sex-and-grade, self-concept score norm. For males, this was true for each of the six drugs assessed, and for females it was true for all drugs except LSD and speed (significant at the .05 level).

CONCLUSIONS

The evidence indicates that deviation from a sex-and-grade, self-concept norm is one parameter to be considered in any complete explanation of teenage drug use. Many have assumed that pressure to conform to one's peers is an adequate explanation for drug use. The results of the present study show that forces other than peer pressure to conform can be at work--in the instance under review, departure from a statistically established peer norm.

Khavari, Khalil A.; Mabry, Edward; and Humes, Mae. Personality correlates of hallucinogen use. Journal of Abnormal Psychology, 86(2):172-178, 1977.

DRUG	Marihuana; Hashish; LSD; Psychedelics
SAMPLE SIZE	298
SAMPLE TYPE	Volunteers
AGE	Adults (18-40)
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire; Eysenck Personality Inventory; Sensation-seeking Scale; Marlowe-Crowne Social Desirability Scale; Taylor Manifest Anxiety Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	21

PURPOSE

Considerable research effort has been directed at determining those personality factors that correlate with drug abuse. However, most studies have focused on opiate users. In an attempt to determine the personality characteristics of hallucinogen users, a group of paid volunteers drawn from labor unions in a large industrial metropolitan area was studied.

METHODOLOGY

The subjects were 298 male and female union members who volunteered to be studied. Each subject was paid $6 an hour to participate, and was administered the following instruments: Eysenck Personality Inventory (EPI), Sensation-seeking Scale (SSS), Marlowe-Crowne Social Desirability Scale (SDS), and Taylor Manifest Anxiety Scale (TMAS). In addition, each subject completed the Wisconsin Substance Use Inventory. The investigation focused on drug-taking behaviors associated with marihuana, hashish, LSD, and other psychedelics.

RESULTS

No significant differences were found between males and females in the sample, and the data were pooled for subsequent canonical analysis. Patterns of weights and coefficients suggested the following two-dimensional interpretation of the relations between personality and drug-use variables. The first canonical dimension reflected an association between personal needs for seeking new experiences and all forms of hallucinogenic use--particularly marihuana and hashish use. The second dimension indicated that the need for social approval and the tendency to be socially uninhibited were clearly associated with marihuana use. Conversely, patterns of negative weights on this variate showed that manifest anxiety, generalized needs for social stimulation, and extroversion/introversion variables were associated with hashish, LSD, and other psychedelic use.

CONCLUSIONS

Given that marihuana scores were differentiated from other hallucinogen scores by the pattern of weights for the predictor variables, the inference that hallucinogenic drug use, other than marihuana use, is associated with a different set of personality attributes seems warranted. This is consistent with previous research by other investigators who suggest that there are profound differences between marihuana users and users of more powerful hallucinogenic drugs. Marihuana users appear to be more gregarious, introspective, unconventional, and rebellious than nonusers; and users of stronger hallucinogens appear more likely to have personality profiles manifesting various forms of psychopathologies than nonusers. It is clear in this investigation that marihuana use is associated with a person's need for social approval and the desire to seek out uninhibited modes of self-expression. The use of other hallucinogens is apparently associated with manifest anxiety, extroversion/introversion, and a tendency to seek out social stimulation, but not with approval seeking or uninhibitedness.

Kilpatrick, Dean G.; Sutker, Patricia B.; Roitzsch, John C.; and Miller, William C. Personality correlates of polydrug abuse. Psychological Reports, 38:311-317, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	34
SAMPLE TYPE	Hospitalized Veterans
AGE	Adults (mean 24)
SEX	Male
ETHNICITY	8 Black; 26 White
GEOGRAPHICAL AREA	South Carolina
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	11

PURPOSE

Although the personality correlates of heroin addiction, LSD use, and marihuana ingestion have been investigated, few data are available which describe personality variables correlated with the pattern of polydrug abuse. A study was undertaken to define a pattern of drug abuse characterizing the polydrug abuser and to compare the polydrug user with control subjects on a battery of objective measures reflecting a wide variety of personality states and traits. Other goals of the study were to determine the extent to which subjects could be classified into polydrug-usage patterns on the basis of personality characteristics and to test these variables in a population composed of a more heterogeneous group than college students and/or psychiatric patients.

METHODOLOGY

Subjects were 17 polydrug users and 17 controls selected from a group of 224 male, hospitalized veterans at a Veterans Administration Hospital in South Carolina. Each of the subjects was administered a structured interview concerning personal substance abuse patterns and a battery of objective personality tests. Subjects were classified as polydrug users if they had used at least one drug from 3 or more of the following categories in excess of 10 times since discharge from service: (1) CNS stimulants, (2) CNS depressants, (3) cocaine, (4) opiate narcotics, (5) hallucinogens, and (6) Darvon or other drugs. Controls were selected on the basis of having no drug experience (usage of marihuana and alcohol was not considered in assignment of subjects to polydrug or nonuse groups), and were matched with polydrug users on the variables of socioeconomic class and age. The mean age of the subjects was 24. Among polydrug users, 16 were white and 1 was black; among controls, 10 were white and 7 were black. The battery of personality tests included the Rokeach Dogmatism Scale, Barron Ego Strength Scale, Eysenck Personality

Inventory, Wolpe-Lang Fear Survey Schedule, Rotter Locus of Control Scale, Zuckerman Sensation-seeking Scale, and the Spielberger State-Trait Anxiety Inventory.

RESULTS

Polydrug users showed significantly higher scores on the Neuroticism scale ($p<.05$), and significantly lower scores on the Lie scale ($p<.01$), of the Eysenck Inventory. Polydrug users also scored significantly higher ($p<.01$) on Total Sensation seeking and on the sensation-seeking subscales of Disinhibition, Experience seeking, Thrill and Adventure seeking, and General Sensation seeking. State anxiety scores of polydrug users were also significantly higher than those of nonusers ($p<.01$). The other tests did not significantly differentiate between the two groups.

Significantly more polydrug users were unmarried than were married in comparison to nonusers ($p<.01$). Also, significantly fewer polydrug users remained in the family home until age 18 than was the case for nonusers ($p<.02$). There were no significant differences between the two groups in frequency of employment.

CONCLUSIONS

The data characterize the polydrug abuser as one who tends to overrespond to stressful stimuli and requires more time than the nonuser to return to a prestress baseline of anxiety following stimulation. The most important differences between users and nonusers, however, were observed in relation to the sensation-seeking variables. Polydrug users exhibit a greater need to engage in activities involving danger, to encounter a broad variety of inner experience, to live a hedonistic life, and to seek out situations which will raise arousal to more optimal levels. The greater number of whites than blacks among polydrug users is consistent with other research, which has described a tendency among blacks to restrict use to opiates and CNS depressants, while whites are more likely to include hallucinogens, CNS stimulants, and other types of drugs in their repertoire. In general, the findings suggest that there are identifiable personality and psychosocial correlates of polydrug abuse which require further investigation in other groups, particularly among females.

Kohn, Paul M., and Annis, Helen M. Drug use and four kinds of novelty seeking. British Journal of Addiction, 72(2):135-141, 1977.

DRUG	Multi-Drug
SAMPLE SIZE	430
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	198 Male; 232 Female
ETHNICITY	White
GEOGRAPHICAL AREA	Ontario, Canada
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire; Novelty Experiencing Scale; Desire-for-Novelty Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	30

PURPOSE

There is evidence that drug use is related to an exaggerated tendency to seek extensive novel experience. Zuckerman and his colleagues (1970, 1972) found that various types of drug use (e.g., marihuana, hashish, amphetamines, and LSD) related to high scores on Zuckerman's Sensation-seeking Scale (SSS); however, not all relationships were consistent over sex and education level. Pearson (1970) developed a measure of novelty seeking, the Novelty Experiencing Scale, which measures external sensation seeking (ES), a liking for active participation in "thrilling" activities; internal cognitive experience seeking (IC), a liking for new cognitive processes which deal with principles; internal sensation seeking (IS), a liking for unusual dreams or fantasies; and external cognitive experience seeking (EC), a liking for new cognitive information which has practical applicability. A study was conducted using this scale to determine the relation between sex, experience seeking, and drug use.

METHODOLOGY

Subjects consisted of 430 12th-grade students from three northern Ontario, Canada, high schools (232 females and 198 males). The students were administered an 80-item modified version of the Novelty Experiencing Scale (NES), a 10-item Desire-for-Novelty Scale, and a questionnaire which obtained demographic and drug-use data. The Desire-for-Novelty Scale (DFN) consisted of items expressing a desire for new experiences and boredom with the status quo. The response alternatives were "like me" and "unlike me." On the NES, the subject was to indicate on a two-point scale whether he or she would expect to like or dislike an activity or experience which reflected one of the four classes of experience seeking.

RESULTS

Very pronounced sex differences occurred in the use of both alcohol and cannabis. More males than females reported being occasional and regular users of alcohol ($p<.005$) and cannabis ($P<.001$). Significant sex differences were also found with external-sensation, internal-cognitive, and desire-for-novelty measures. Males scored higher than females on ES ($p<.00$), but lower on IC ($p<.05$) and DFN ($p<.05$).

Regarding novelty seeking and drug use, three subscales of the NES (IS, EC, and IC) as well as the DFN scale related to one or more types of drug use. There were significant associations between alcohol use and scores on internal sensation ($p<.05$) and external cognition ($p<.01$). Both relationships were complex, in that medium-IS scorers were overrepresented, and medium-EC scorers were underrepresented among regular users of alcohol. Cannabis use related positively to internal sensation seeking for the males ($p<.001$), while no such relationship occurred with the females. Medium and high scorers on the IS were more frequently tobacco smokers than low scorers ($p<.02$). Also, medium scorers on the DFN were more often smokers than low scorers ($p<.02$). High and medium scorers on IC reported use of painkillers more often than low scorers ($p<.01$ and $p<.05$, respectively).

CONCLUSIONS

According to Zuckerman (1972), "drug usage is an aspect of a general sensation-seeking trait rather than a specific type of sensation seeking." The present results fail to support this assertion. Of the twenty possible relationships between five measures of novelty seeking and four types of drug use (alcohol, tobacco, painkillers, and cannabis), only six proved significant. Further, three of these involved a particular kind of novelty seeking, namely internal sensation seeking. Thus, drug use appears to be associated specifically with a high optimum level for particular kinds of stimulation, namely the stimulation of fantasy, internally generated feelings, and unusual perceptual experiences.

Kurtines, William; Hogan, Robert; and Weiss, Daniel. Personality dynamics of heroin use. Journal of Abnormal Psychology, 84(1):87-89, 1975.

DRUG	Opiates
SAMPLE SIZE	372
SAMPLE TYPE	Incarcerated; Students; Police Officers; Treatment
AGE	Adults
SEX	Male
ETHNICITY	White; Other
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	California Personality Inventory
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	12

PURPOSE

In spite of the substantial public concern over the problem of drug addiction, surprisingly little is known about the personality dynamics of hard drug use. Clinical descriptions suggest that drug addicts are products of disturbed mother-child relations, have mild-to-moderate character disorders, and are socially inept, immature, and insecure. This study examined the validity of these clinical reports by comparing a sample of male heroin addicts with three other behaviorally deviant samples and a group of normal men.

METHODOLOGY

The total sample of 372 consisted of 59 white male heroin addicts enrolled in a treatment program in Baltimore, Maryland; 37 white male undergraduate marihuana users; 26 male psychiatric patients from a Veterans Administration Hospital; 142 male delinquents; and 108 police officers from Oakland, California. All subjects completed the California Personality Inventory (CPI), which was scored for the standard 18 scales plus an additional scale developed by Hogan (1969).

RESULTS

Heroin addicts scored significantly below every other group on Responsibility and Socialization. Heroin addicts and marihuana users were the two highest groups on Flexibility; persons with this score pattern tend to be irresponsible, careless of rules and conventions, impulsive, and self-centered. The marihuana users differed from heroin addicts in other areas. Because the marihuana users were all college students, the two groups probably differed in terms of social status. The marihuana users were also significantly more socially skilled and self-assured than the addict sample. Their scores on Achievement via Independence and Intellectual Efficiency suggested that they were brighter and more ambitious. Both groups scored low on Socialization; however, the addict group scored two standard deviations below the marihuana users. The antisocial tendencies of college marihuana users appeared to be offset by unusually high scores for Empathy.

Addicts scored highest on Self-acceptance, Social Presence, and Flexibility, and their lowest scores were for Socialization, Responsibility, and Empathy. The addicts were distinctly non-neurotic if neurosis is defined as disturbed interpersonal functioning. They were noticeably more poised and self-assured than the hospitalized psychiatric sample. On the other hand, they were significantly less socialized and responsible than the group of incarcerated delinquents.

CONCLUSIONS

The data suggest that the addicts studied were not sick, but they were undersocialized and probably psychopathic; their drug use seemed to arise from a general background of hostile and antisocial tendencies rather than from a profound sense of interpersonal inadequacy. The results obtained can be interpreted in terms of a model of character development proposed by Hogan (1973). According to the model, moral character can be described using five dimensions (moral knowledge, moral judgment, socialization, empathy, and autonomy), two of which (socialization and empathy) are assessed by the CPI. On both measures the heroin addicts received the lowest scores of any other group; this suggests a very low, even dangerously low, level of character development. It would appear that rehabilitation procedures for addicts might more profitably be concerned with values and personal responsibility than with social effectiveness and the sense of personal worth.

Obitz, Frederick W.; Cooper, Kimberly; and Madeiros, Donald C. General and specific perceived locus of control in heroin addicts. International Journal of the Addictions, 9(5):757-760, 1974.

DRUG	Opiates
SAMPLE SIZE	50
SAMPLE TYPE	Treatment (inpatient)
AGE	Adults (mean 20.6)
SEX	Male
ETHNICITY	White
GEOGRAPHICAL AREA	Fort Bliss, Texas
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Rotter's Internal-External Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	5

PURPOSE

Persons labeled "internals" on Rotter's Internal-External (I-E) Scale perceive themselves as being in control of their own behavior, while persons labeled "externals" perceive fate, chance, or others as being in control. Individuals addicted to alcohol or drugs might logically be predicted to be persons who do not perceive themselves to be in control of their behavior. In order to test this hypothesis, 50 heroin addicts were administered the I-E Scale and a locus of control of drug-taking scale.

METHODOLOGY

Fifty heroin addicts in a heroin detoxification program at Fort Bliss, Texas, constituted the sample of subjects. All were male and white, and their mean age was 20.6 years. All subjects were administered two tests. The first was the I-E scale. The second was a scale specifically designed to measure perceived locus of control of drug-taking behavior.

RESULTS

Using Rotter's general norms for comparison, subjects in the present study were significantly more external ($p<.001$). Subjects were also significantly more external than the following groups reported by Rotter: (1) a national stratified sample of high school students ($p<.001$); (2) prisoners aged 18 to 26 ($p<.001$); and (3) 18-year-olds from the Boston area ($p<.05$). However, subjects did not endorse items keyed "external" on the perceived locus of drug-taking control scale significantly more frequently than they endorsed items keyed "internal."

CONCLUSIONS

The results of this study parallel those reported earlier for softcore drug users (Obitz et al., 1972). Both heroin addicts and drug users not classified as heroin addicts perceive themselves as not in control of their behavior in general. However, they do feel they have relatively more control over their drug-taking behavior. Further, heroin addicts perceive no relationship between control over their behavior in general and control over their drug-taking behavior in particular. Why this paradox exists is unknown.

Philips, Billy U.; Bruhn, John G.; and Gouin, Helen Dunn. Internal-external control and drug usage patterns in drug education course participants. Drug Forum, 4(3):217-232, 1975.

DRUG	Multi-Drug
SAMPLE SIZE	559
SAMPLE TYPE	Drug Education Participants
AGE	Adults (mean 33.5)
SEX	455 Male; 104 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Oklahoma
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaires; Rotter's Internal-External Locus of Control Scale
DATE(S) CONDUCTED	1972 - 1973
NO. OF REFERENCES	6

PURPOSE

A previous study on attitudinal change in adult participants following a ten-day drug education course at the Oklahoma Drug Education Center indicated that many of the participants had a wide variety of experiences with drugs other than marihuana and hallucinogens. Those who were users of hallucinogens and marihuana were primarily mental health workers and drug abuse educators and counselors, very few of whom were engaged in drug education activities one year after taking the course. Another study was conducted and the following hypotheses tested: (1) there is a relationship between the participants' patterns of personal drug use and their primary occupations; (2) the drug-usage patterns of the participants would not be significantly related to scores on Rotter's Internal-External Locus of Control Scale; (3) the occupational groups would not differ significantly in pre- to post-course changes in their learning priorities; (4) participants' personal histories of drug use would not be significantly related to changes in their learning priorities; and (5) prior experience in drug education would not be related to current drug use or the participants' self-evaluation of competence in drug education.

METHODOLOGY

Subjects were 559 adults attending one of 18 drug education courses conducted in 1972 and 1973 at the Oklahoma Drug Education Center. Participation was limited to individuals who were either actively engaged in drug abuse education, treatment, or counseling, or who planned to become involved in such work. Participants included professionals, paraprofessionals, students, lawyers, and ex-addicts. Over half were in the military. There were 455 men and 104 women; their mean age was 33.5 years. Half of the courses offered were designed as "general" and the other half as "clinical." The general courses were for those with little or no experience in drug education. The clinical courses were primarily for those working in drug treatment and rehabilitation centers and who wished to enhance their clinical and counseling skills. All participants filled out a questionnaire which elicited background information, including a personal history of use of caffeine, tobacco, alcohol, marihuana, hallucinogens, amphetamines, barbiturates, and opiates. Participants also completed Rotter's Internal-External Locus of Control Scale, an instrument containing 23 paired statements: one of each pair suggests that events are beyond the individual's control; the other suggests that events are a result of one's own behavior. On the first and last days of the course the participants were also asked to rank the learning priorities for drug education in order of importance. At the conclusion of the course the participants were asked to rank their self-evaluation of competence to work in drug education and their degree of satisfaction with the course.

RESULTS

Drug abuse educators and counselors included the highest percentage of current tobacco users (69%), while health workers and the military included the lowest (47% and 48%, respectively). Educators included the highest percentage of current alcohol users (91%); mental health and health workers included the lowest (67% and 68%, respectively). Only 5% of the military participants were currently using marihuana, in contrast to 23% of the drug abuse educators and counselors and 24% of the mental health workers. Use of hallucinogens, amphetamines, barbiturates, and opiates was minimal amongst all participants; however, 14% of the educators were currently using opiates.

Regarding internal-external locus of control, there were no statistically significant relationships found between the usage patterns of caffeine, tobacco, and alcohol and I-E scores; however, marihuana, hallucinogen, and amphetamine "never users" differed significantly from current users. Also, current users of marihuana, barbiturates, and opiates differed significantly from individuals who had stopped using these drugs. "Never users" of marihuana, hallucinogens, amphetamines, barbiturates, and opiates were more internally controlled; current users were more externally controlled; persons who had stopped using drugs fell between the two extremes. There were no statistically significant differences in the I-E scores of the occupational groups.

Regarding changes in learning priorities, the direction of pre- to post-course changes in ranking learning priorities was remarkably similar for all occupational groups. In general, all the groups rated knowledge about referral sources, legal and enforcement aspects, self-awareness, and familiarity with the drug culture higher at the end of the course. There was a slight trend for participants who had stopped using hallucinogens, barbiturates, amphetamines, and opiates to have attended a greater number of drug education courses. There was no relationship between competency and participants' degree of satisfaction with the course.

CONCLUSIONS

Despite the differing drug experiences of the various occupational groups, neither occupation nor personal drug experience greatly influenced participants' rating of learning priorities for drug education. The finding that current users of marihuana, hallucinogens, amphetamines, barbiturates, and opiates were more externally controlled than "never users" of these drugs seems to emphasize the importance of personality characteristics in drug use, irrespective of the orientation of drug education courses. Factors greater than drug education per se appear to influence personal drug behavior. It might be hypothesized that individuals who alter their drug-usage patterns would be more internally controlled or would fall midway on the internal-external control continuum.

Reith, Gunther; Crockett, David; and Craig, Kenneth. Personality characteristics in heroin addicts and nonaddicted prisoners using the Edwards Personality Preference Schedule. International Journal of the Addictions, 10(1):97-112, 1975.

DRUG	Opiates
SAMPLE SIZE	140
SAMPLE TYPE	Incarcerated
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Canada
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Edwards Personal Preference Schedule
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	13

PURPOSE

There have been many attempts to describe the personality characteristics of narcotic addicts with various measuring devices such as the TAT, MMPI, and Rotter's Internal-External Scale. This study attempted to compare the self-reported personality characteristics of addicted and nonaddicted criminal offenders using a personality inventory corrected for social desirability.

METHODOLOGY

Seventy matched pairs of addicted and nonaddicted prisoners at the Canadian Federal Penitentiary were administered the Edwards Personal Preference Schedule. The influence of age, education, intelligence, and environment on scores--as well as addiction--was tested. Data were analyzed using a 2X2X2 between-groups design.

RESULTS

The multivariate tests of the Addiction X Age X Education interaction, the Addiction X Education interaction, and the Addiction X Age interaction were nonsignificant. The multivariate Age X Education interaction was significant ($p<.017$) as were the univariate interactions for Achievement ($p<.001$) and Deference ($p<.019$). The analysis suggested that while the older offender with a poor educational background has learned the consequences of limited educational exposure in terms of jobs and earning power, and that his responses reflect his desire to rectify this deficit, the relatively younger offenders have not had the opportunity to learn the consequences of a poor educational background and are therefore unmotivated. In contrast, the inmates--both younger and older--with relatively high educational achievement have had this need met. Relatively young criminals show much less deference in answering questionnaires than do other offenders. This suggests that these younger offenders may feel that their educational achievement has given them a certain "status" which has not been borne out by the experience of the older inmates.

The multivariate test of the significance of the main effect associated with addiction was significant (p<.021). In addition, there were five significant univariate differences: succorance (p<.001); abasement (p<.013); endurance (p<.002); heterosexuality (p<.006); and aggression (p< .010). Addicted offenders revealed more succorance, heterosexuality, and aggression than the nonaddicted inmates. In contrast, addicted inmates showed less abasement and endurance than the criminal offenders.

While the overall results for the 16 EPPS variables were significant, only two tests, succorance (p<.001) and aggression (p<.01), made significant independent contributions to the prediction of group membership. These two variables provided the maximum discrimination between the addicted and nonaddicted offenders, with an overall accuracy rate of 67.9%.

CONCLUSIONS

The results of this study have several implications for future research and therapy within the field of drug addiction. The nonsignificant results associated with the age and educational achievement factors, as well as the negligible effect of covariating out the offenders' intellectual and environmental backgrounds, suggest that future research does not have to be overly concerned with controlling for these factors, as they do not appear to obscure the addict's response to personality tests. It could be of theoretical interest to determine whether the personality differences cited here existed during the preaddiction stages of the addict's life and thus contributed to his "addiction proneness" or are, in fact, drug-induced changes which are maintained in the absence of drug use. Whether the conflictive personality organization of a high need for aggression combined with a high need for succorance preexisted in the addict's personality or is a drug-induced change, this paradoxical combination does represent a basic treatment goal for traditional or experimental therapy programs. Furthermore, these results suggest that the personality characteristics and organization of the addict as measured by the EPPS are more important in identifying and screening addicts for place and therapy than traditional measures of clinical psychopathology such as the MMPI.

Schaeffer, Garry M.; Schuckit, Marc A.; and Morrissey, Elizabeth R. Correlation between two measures of self-esteem and drug use in a college sample. Psychological Reports, 39(3):915-919, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	390
SAMPLE TYPE	College Students
AGE	Adults (mean 19.5)
SEX	171 Male; 219 Female
ETHNICITY	92% White
GEOGRAPHICAL AREA	San Diego, California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire; Coopersmith Self-esteem Inventory; A Priori Identity Crisis Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	24

PURPOSE

The use of drugs and alcohol has received increasing attention as one of the many problems that young people face today. Results from alcohol studies generally substantiate that adolescent problem drinkers are impulsive, aggressive, anxious, and depressed. The drug literature, however, is less clear. Some authors assert that a particular personality type is involved in drug use, while others have found no differences between drug users and nonusers. A study was conducted in order to determine the relationship between drug and alcohol use and self-esteem among students living in a coed dormitory. It was hypothesized that the higher the frequency of drug and/or alcohol use, the lower the individual's self-esteem.

METHODOLOGY

Subjects consisted of 171 male and 219 female residents of a coed dormitory at San Diego State University. The mean age of the students was 19.5 years, and 92% were white. All subjects completed a questionnaire which included the Coopersmith Self-esteem Inventory, the A Priori Identity Crisis Scale, a section on drug and alcohol use patterns, and a section on demographic information.

RESULTS

Alcohol and marihuana were the drugs of choice and were used moderately by most of the students. Regarding self-esteem, only heavy use of alcohol was significantly related to low self-esteem scores ($p<.02$). The results did not support a relationship between the use of marihuana and self-esteem. This is consistent with the findings of other authors (McAree et al.,1969, 1972; Hogan et al., 1970; Peterson, 1972; Demeritt, 1972; and Reiter, 1970).

CONCLUSIONS

The results may be associated with sample characteristics and the frequency of substance use in the sample. The subjects were young California college students living in a semi-urban environment in a relatively liberal state. The subjects' liberal attitudes plus their reported moderate use of alcohol and marihuana suggests a "socially acceptable" weekend type of use which is less likely to be associated with personality problems. The results are consistent with the literature on the personality correlates of drug or alcohol use, which suggests a continuum with heavy drug or alcohol users exhibiting the most pathology and moderate-light drinkers and marihuana smokers showing little or none.

Schmidt, Gary L. A study of achievement motivation and frustration in glue sniffers. Drug Forum, 4(4):331-348, 1975.

DRUG	Inhalants
SAMPLE SIZE	38
SAMPLE TYPE	Delinquents
AGE	Adolescents (range 12-16)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Ohio
METHODOLOGY	Experimental
DATA COLLECTION INSTRUMENT	Interviews; Ring-toss Game; Ball and Maze Game
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	21

PURPOSE

Most glue sniffers range in age from 7 to 17, with peak occurrences of abuse in the years between 12 and 16. The great majority (90%) are males. The families of glue sniffers are multiproblem families. There tends to be a lack of normal husband-father involvement, as well as an exposure of children to excessive drinking, sexual promiscuity, and older sibling truancy and delinquency. According to Robert Hanson (1967), glue sniffers typically display a record of failure and experience a sense of frustration in their school activities. This observation suggests that glue sniffers may experience more fear of failure and lower achievement motivation than their more normal peers. A study was conducted to compare the responses given by glue sniffers and non-glue sniffers to a game-structured situation involving goal-setting and response to failure and success.

METHODOLOGY

Institutionalized boys from two youth camps in Ohio were employed as subjects. Of the 38 subjects, 19 were glue sniffers and 19 were not. The subjects ranged in age from 12 to 16 years. Subjects were interviewed, and then they participated in a ring-toss game and a ball and maze game. In the ring-toss game, more points were given the farther away the subject was from the target. In the ball and maze game, the subject had to estimate how long it would take him to roll the ball through a maze. At one camp the prize consisted of a credit for 10 cans of soda; at the other camp the prize was a $3 addition to the winner's commissary fund. In the ring-toss game the following hypotheses were made: (1) glue sniffers would tend to take fewer chances at long range, and more at short range than the nonsniffers; (2) failure (miss) on the previous throw would make glue sniffers move closer at a higher rate than non-glue sniffers;

and (3) conversely, success (hit) would make non-glue sniffers increase their distance from the peg at a greater average rate than glue sniffers. In the ball and maze game, it was hypothesized that sniffers would show greater increases in estimated performance times in response to failure than would nonsniffers. It was also hypothesized that outward "manifestations" of frustration would be more apparent in the glue-sniffing group.

RESULTS

Analyses of the data from both the ring-toss game and the ball and maze game showed no differences in the achievement motivation and frustration of the two groups. While boys in both groups showed occasional outward manifestations of frustration (vulgar language, physical aggression), the behaviors were no more common in the glue sniffers than the nonsniffers.

CONCLUSIONS

A further study in this area of research would benefit by a recognition of the following factors. First, it must be realized that glue sniffing and drug usage in general are not independent of the culture and environment surrounding the individual. The fact that a person has been classified as a glue sniffer or nonsniffer based on a short interview does not mean that the person has come to the point where the use of drugs has been often, and recent, enough to alter characteristics such as goal-setting and level of frustration. Second, the value of the reward for each individual may have been sufficiently different to lessen or heighten the variables of perceived fear of failure or achievement motivation. Changing the reward at both camps may have changed the degree of interest in achieving that amount.

Sheppard, Charles; Ricca, Elizabeth; Fracchia, John; and Merlis, Sidney. Psychological needs of suburban male heroin addicts. Journal of Psychology, 87:123-128, 1974.

DRUG	Opiates
SAMPLE SIZE	51
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults (mean 23.4)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Suffolk County, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Edwards Personal Preference Schedule
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	5

PURPOSE

Drug treatment programs have been designed to meet addicts' needs, but there are few systematic efforts reported directed at delineating specifically what these needs are, especially at a less visible psychological level. The Edwards Personal Preference Schedule (EPPS) is an objective test developed from Murray's theory of personality development which measures the intensity of 15 psychological needs that motivate and direct behavior. A study using this instrument was conducted in order to determine if a sample of narcotic addicts scored differently from a non-addict sample on the EPPS need constructs.

METHODOLOGY

As part of the general intake procedure, 51 male applicants of the Suffolk County methadone maintenance program completed the EPPS. All were actively using drugs when tested. Most were multiple drug abusers. Their mean age was 23.4 years. The majority came from families that were at or above the economic median salary for the county during their adolescence. Thirty-nine percent came from families that could be considered socioeconomically deprived. Because of the disproportional sample sizes (the 51 cases for the suburban addict sample as compared with the 4,031 cases in the general adult male normative population), a hypothetical sample of 51 cases was drawn from the normative sample for comparative purposes. Tests of significance were applied to the suburban heroin addict sample and to the general adult male normative sample data to determine if they scored differently on the 15 EPPS psychological need constructs.

RESULTS

Suburban male heroin addicts scored significantly higher (p<.001) than the general male sample on scales measuring the need for heterosexuality (means: addicts, 16.63; general, 7.70), autonomy (addicts, 16.37; general, 14.02), and change (addicts, 16.29; general, 13.87). Addicts scored significantly (at least at the .01 level) lower than the general male normative sample on the need for endurance (addicts, 12.65; general, 16.97), deference (addicts, 11.53; general, 14.19), order (addicts, 12.49; general, 14.69), affiliation (addicts, 12.35; general, 14.51), and dominance (addicts, 12.41; general, 14.50).

CONCLUSIONS

The significantly high need for autonomy, plus that for change, have mutually supportive aspects which can hinder development of mature functioning and can be satisfied in drug-taking behavior.

Psychopathology

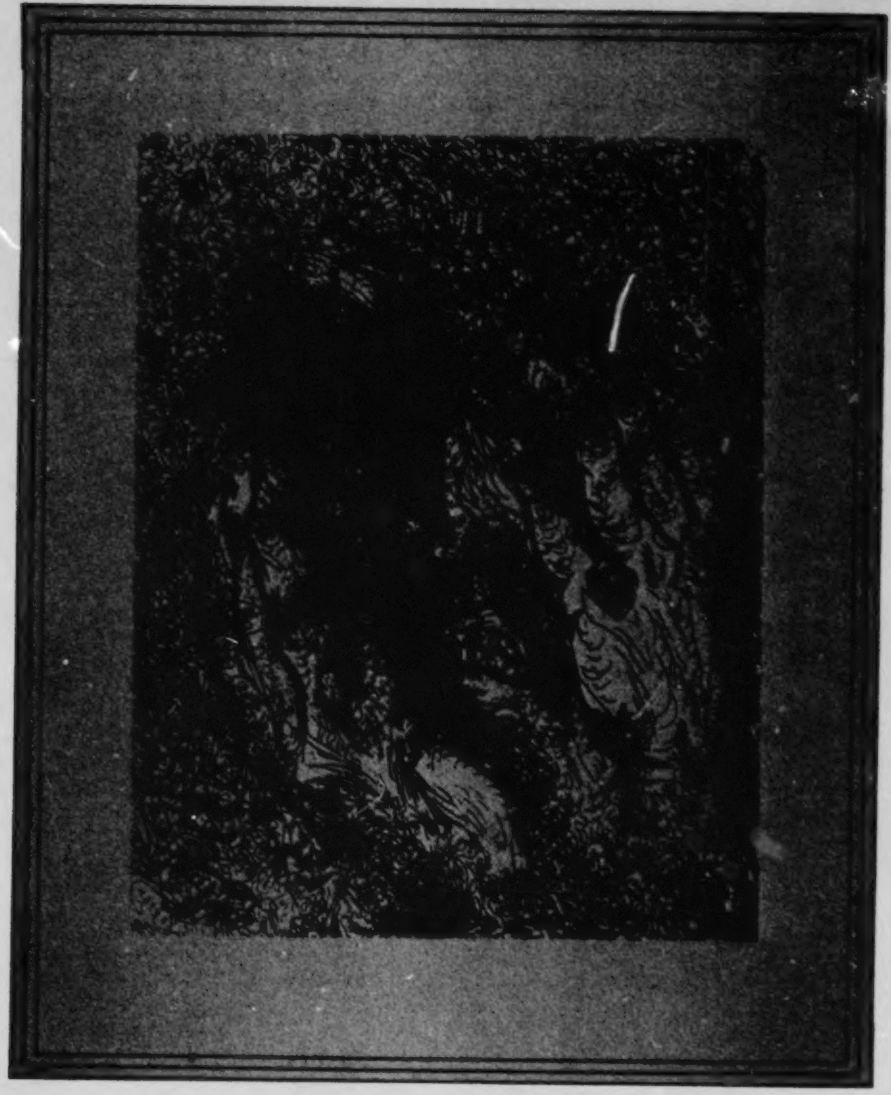

Illustration:

Despair III
Gabor Peterdi, 1938
Used by permission of the artist

Abruzzi, W. Drug-induced psychosis. International Journal of the Addictions, 12(1):183-193, 1977.

PURPOSE

A description of the negative effects of drug use, based on five years of experience treating over 5,000 bad trips at youth festivals such as Woodstock, Powder Ridge, and Celebration of Life, as well as in private practice, is presented. Implications for treatment are also discussed.

SUMMARY

The findings of over 5 years of experience in observing and treating persons experiencing "bad trips" seriously question the commonly held conclusions that there are great differences between naturally occurring psychosis and drug-induced psychosis; that the treatment of any panic state or psychotic episode, drug-induced or not, should be handled with chlorpromazine; and that drug-induced psychosis is rarely followed by psychotic behavior, except when the psychosis is marginally present before chemical exposure.

Marihuana

It is possible to have a psychotic experience (even long-lasting) on marihuana alone. A total of 198 cases were observed during the 5-year period. Seventy-three percent of the patients experiencing "flashbacks" had the experience precipitated by alcohol or marihuana.

Amphetamines

Amphetamines produce a psychotic state indistinguishable from so-called naturally occurring schizophrenia. The psychosis is frequently evidenced by paranoia, delusions, autism, and hallucinations--visual and otherwise--believed to be real by the patient. While this might represent nothing more than a liberation of a previous underlying psychotic state, in many of the cases seen, the subject was functioning well in social situations and was in touch with reality before exposure to amphetamines. There also appears to be no dosage relationship to these episodes. Some of the speed freaks observed were taking 2,000 to 4,000 mg of dexedrine a day, while some obese housewives precipitated into acute paranoid states on 15 to 30 mg per day. It seems that there is no reliable way to predict which patient is vulnerable, which dosage is dangerous for which patient, and how long, if at all, the drug can be taken safely by any given patient.

LSD

Following exposure to LSD, hundreds of persons exhibited conditions absolutely indistinguishable from that seen in acute paranoid psychosis. Many of these cases were autistic. Others suffered from delusions, visual, and auditory hallucinations; rambled on in incoherent speech patterns; displayed bizarre dress, attitudes, and mannerisms; and were completely out of contact with reality. Many of the cases were indistinguishable from schizophrenia. Once again, many of the subjects were apparently enjoying fairly "normal" lives before their drug exposure.

Treatment

In treating both anxiety states and psychotic reactions, two methods were used: "talking down" and chemical treatment. In comparing people who received either one or the other treatment, it appeared that among those experiencing psychotic states, "talk down" treatment was more successful than chemical treatment for those exhibiting hallucinations, paranoia, or aggressive behavior. In drug-induced aberrances, the anticipations of the viewers are very important in structuring the reactions of the subject. If his behavior is not looked on as being really bizarre, the subject very often worries less about what's happening to him and finds it easier to revert to a less strange, more "normal" mode of action.

Serious long-range psychiatric residua after negative drug experiences were commoner than frequently reported, characterizing 5% to 10% of those cases which permitted a long-term follow-up.

CONCLUSIONS

Based on findings of 5 years' observance and treatment of "bad trips," it is recommended that those with a history of emotional disturbances, and especially "bad trips," should avoid intoxicants, including alcohol and marihuana. Amphetamines should be prohibited except for certain carefully controlled cases. Bad trips, when possible, should be treated with reassurance, psychologically oriented counseling, and compassion. Treatment with medicines, particularly chlorpromazine, should not be used.

Brook, Robert; Szandorowska, Barbara; and Whitehead, Paul C. Psychosocial dysfunctions as precursors to amphetamine abuse among adolescents. Addictive Diseases, 2(3):465-478, 1976.

DRUG	Amphetamines
SAMPLE SIZE	117
SAMPLE TYPE	Treatment (inpatient)
AGE	Adolescents; Adults (15-25)
SEX	86 Male; 31 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	London, Canada
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Psychological Tests; Questionnaire; MMPI, WAIS
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	37

PURPOSE

There is a need for research that addresses itself directly to the temporal sequence in which psychosocial development and drug-using behaviors are manifested by high-dose amphetamine abusers. Drug-dependent adolescents seeking long-term treatment were compared with nonusers of drugs in terms of their personality characteristics, and a systematic examination was made of the pre-drug-use adjustment of chronic drug users.

METHODOLOGY

A total of 117 residents (86 males and 31 females between the ages of 15 and 25, for whom complete data were available) admitted to the Residential Treatment Center ("414") in London, Canada, between December 1970 and October 1972 were studied. At time of contact with 414, 97% had used drugs for at least 6 months; 70% used amphetamines as their drug of choice, but all were chronic amphetamine users with histories of multiple drug use. For comparison data, sources were: (1) 24 students from a London high school who had no history of nonmedical drug use from grades 10, 11, and 12; (2) educational histories of London high school population norms; and (3) Wechsler Adult Intelligence Scale (WAIS) norms from 120 male high school students between 15 and 16 years of age.

Instruments used were: (1) a face sheet completed on all residents at time of first interview on basic identifying and background data; (2) the MMPI (Form R); (3) the WAIS (Form 1) administered to a random sample of 30 amphetamine users; (4) school records; and (5) a parent questionnaire mailed to the parents of all 117 residents.

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RESULTS

Home environments for drug-using residents constituted high-risk situations, predisposing to the development of social, emotional, and behavioral problems (40% were from broken homes, compared to 22% in the comparison group of high school students). The average number of residences since birth was 6.6 for drug users, and personal reports during interviews repeated feelings of isolation from peers. Many users were seeking ways of escaping from family situations before their heavy involvement with drugs began.

Both the drug-using residents and the comparison group scored within acceptable limits on the Lie, Question, and Correction validity scales of the MMPI. Infrequency scale scores were within normal limits for all comparison group subjects, but moderate to very high for a number of the residents. The residents' MMPI scores for the clinical scales were consistently higher than those of the comparison subjects, and were significant on all scales ($p<.01$). Users showed elevated scores on the Schizophrenia, Psychopathic Deviate, and Depression scales, with extreme elevation on the schizophrenia dimension. Comparison of male and female residents showed that the mean scores for the females were higher than those for the males on all clinical scales, with the difference being significant on the Psychasthenia ($p<.05$) and Schizophrenia ($p<.01$) scales.

Thirty-seven percent of the residents had been enrolled in a 5-year college preparatory program, while all of the high school comparison group were in the 5-year stream. The academic performance of the user residents was poor compared to that of the comparison group (academic average for last grade completed, 62.5% vs. 73.5%). The mean grade completed was 10 for the users, and 11.7 for the comparison group. Formal school records for 20 of the users showed that half dropped out of school before the end of the academic year, but results of the WAIS test showed that the users were bright-normal in intellectual functioning (mean Full Scale IQ, 108). Seventy percent of the parents of the users felt their children's problems predated drug use. On the average, parents first noticed problems when the child was 12; 45% felt that the problems dated from early childhood. Eighty-nine percent of the parents did not approve of their children's friends, and of these, 67% indicated that this influence preceded the onset of drug use.

CONCLUSIONS

On the basis of the study, there was considerable evidence of psychosocial dysfunction among the residents, much of this maladjustment clearly predating involvement with drugs. This suggests that the majority of these adolescents use drugs as a coping mechanism, an idea that has been extensively developed elsewhere (Zax and Stricker, 1963; MacDonald, 1964; Ellinwood, 1969; Cox and Smart, 1972; Whitehead and Brook, 1973). Thus, drug abuse is but one of the manifestations of underlying personality and social maladjustment.

Korin, Hyman. Comparison of psychometric measures in psychiatric patients using heroin and other drugs. Journal of Abnormal Psychology, 83(2):208-212, 1974.

DRUG	Opiates
SAMPLE SIZE	44
SAMPLE TYPE	Psychiatric Patients
AGE	Adults (range 19-33)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	14

PURPOSE

Addiction patients have been described mainly as sociopathic or as having a personality or character disorder. Other narcotic addiction patients are reported to have psychoneurotic and psychotic features. Using the Bender-Gestalt test, a comparison was made of heroin-using and nonopiate-using psychotic and nonpsychotic groups. In addition, tests of mental ability and affect were administered to determine whether these factors were related.

METHODOLOGY

Forty-four drug-using patients were examined: 27 were heroin users; 17 had used a variety of nonopiates including marihuana. Both heroin patients and nonopiate patients had subclassifications: personality inadequacy, anxiety neurosis, neurotic depression, psychotic depression, paranoid schizophrenia, and undifferentiated schizophrenia. None of the patients had any obvious brain disease.

All of the patients were Vietnam-era service veterans, aged 19-33, and education levels were about the same in each group. Fourteen of the heroin patients had stopped taking drugs one to three months prior to the study. The 13 nondetoxified patients and the majority of the nonopiate group had indulged in drugs until the day just prior to their arrival at the hospital.

Each patient was administered the Bender-Gestalt test, the Kent Series of Emergency Scale D, and the Multiple Affect Check List. A 2 x 2 factorial analysis of variance was applied to evaluate the effects of psychosis, drugs, and any combined effect of psychosis and drugs on various tests. An analysis of covariance was used to correct the Bender-Gestalt scores for the variation on the Kent scores.

RESULTS

The Bender-Gestalt scores of the heroin patients were markedly poor regardless of whether psychosis was present. The drug effect was significant ($p<.05$), but no significant effects were found for psychosis or interaction between psychosis and drug factors. On the Kent Series of Emergency Scale, differences between the mean scores of the subgroups were small. No significance was indicated for psychosis and drug effects or for the interaction of these factors. For the Multiple Affect Adjective Check List, the drug and psychosis effects were nonsignificant. The combined effect of these factors reached the .05 level of significance, indicative of the marked differences between the means of some of the subgroups. Significant Pearson correlations between the mental ability and the Bender-Gestalt scores were found in the heroin (-.57) and nonopiate (-.65) groups.

Although the mean Bender-Gestalt scores of the heroin and nonopiate groups were high on the Use of Space, Closure, Curvature, Angulation, and Retrogression factors, there was little difference between the groups. The heroin group had the greater score on 13 of the factors ($p<.05$). Differences were significant on the Use of Space ($p<.02$), Rotation ($p<.05$), and Perseveration factors ($p<.05$). Perseverations were found in 10 of the 27 heroin patients in comparison to only 2 in the 17 nonopiate patients. Of these 10 heroin patients, 8 were detoxified. The total Bender-Gestalt test score means of the detoxified and nondetoxified subgroups were not significantly different; similarly, differences between the two groups were not significant on the Kent test and the Multiple Affect Adjective Check List.

CONCLUSIONS

The majority of the nonopiate patients were psychotic patients who reproduced the Bender-Gestalt figures more adequately than the heroin nonpsychotics. The low distortion indicated by the mean score of the nonopiate psychotic patients suggests that, had more of the nonopiate patients been nonpsychotic, the results would have been the same. Factors which could not be controlled--such as the frequency of use of the drugs, the time of last use of the drugs, and the fact that a third of the heroin group had just arrived from Vietnam--may have played a role in producing the findings.

Kwant, Fred; Rice, James A.; and Hays, J. Ray. Use of heroin addiction scale to differentiate addicts from rehabilitation clients. Psychological Reports, 38:547-553, 1976.

DRUG	Heroin
SAMPLE SIZE	167
SAMPLE TYPE	Treatment (outpatient); Vocational Rehabilitation Clients
AGE	Adults (range, 20-30)
SEX	132 Male; 35 Female
ETHNICITY	55% White; 25% Black; 20% Mexican-American
GEOGRAPHICAL AREA	Texas
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	MMPI; Heroin Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	11

PURPOSE

Some efforts have been made to develop personality instruments that would identify the addict and the most effective treatment modality for particular individuals. An attempt was made to determine the degree to which the heroin addiction scale (He), which was developed from the MMPI, discriminates between addict and vocational rehabilitation clients, and whether or not the profile patterns of addicts differ from the profiles of other types of clients.

METHODOLOGY

The addict group included 76 males and 21 females, with a mean age of 25.8 and 27.9 years, respectively. Ethnic distribution was 54 whites, 24 blacks, and 19 Mexican-Americans. All subjects were enrolled in the methadone treatment program at the Texas Research Institute of Mental Sciences. MMPI data were obtained shortly after admission to the program. The vocational rehabilitation group consisted of 56 males and 14 females, with a mean age of 24.1 and 21.8 years, respectively. The ethnic groups were represented in a similar ratio to the addict group. The rehabilitation clients were drawn from those referred by the Texas Rehabilitation Commission for psychological evaluation. Analysis of variance was performed to examine whether or not the groups differed with respect to: (1) elevation and pattern of the MMPI validity, clinical, and three auxiliary scales (Dependency, Ego strength, and Dominance); (2) elevation of the He scale; and (3) sex.

RESULTS

For the validity scales, interaction of scale by sex by group was significant ($p<.01$). The F scale was higher for the experimental than the control group, and higher for males than females. The L and K scales were identical. For the clinical scales, interaction of scales by sex by group was not significant; however, interaction of scales by group was significant ($p<.001$). The addict group obtained higher scores than the control group, except on the Mf scale. Interaction of scales by sex was significant ($p<.001$), with males obtaining higher elevations on the majority of the clinical scales. Group differences were significant ($p<.001$), with the addict group scoring higher. The difference between male addicts and controls was larger than between females of both groups, and were significant ($p<.001$). The profile for the control group showed no T-score means above 70, the highest T-score means being on Pd and Sc (67 and 65, respectively). In contrast, the addict group had elevations above a T-score of 70 on D, Pd, and Sc, with means of 73, 75, and 71, respectively.

For the auxiliary scales, interaction of sex by group was significant ($p<.01$). The group mean for Dy was higher for addicts; Do, for controls; and interaction of scales by sex was significant ($p<.001$). Females were more dependent than males and manifested less ego strength. Scales effect was significant ($p<.001$), with Dy significantly higher than Es. Regarding the He data, there were significant sex differences ($p<.01$), with males scoring higher than females. There were also significant group differences ($p<.001$), with addicts scoring higher. Mean raw scores for male addicts, female addicts, male controls, and female controls were 36.1, 34.1, 31.4, and 27.8, respectively.

Ethnic differences within the heroin addict group showed significance only with scale effect ($p<.001$). For the auxiliary scales, the significant ethnic effect ($p<.01$) showed Mexican-Americans less dependent than blacks and whites. Significant ethnic differences were evident on the He scale ($p<.05$), with blacks scoring lower than whites and Mexican-Americans.

The correlation of group status with the He scale was .41 and was the best predictor of group status among all the variables. Also highly correlated with group status was the Hs scale (positive correlation with addiction) and education (negative correlation with addiction).

CONCLUSIONS

The 4-2-8 addict profile obtained is similar to that of the mean profile of institutionalized addicts obtained during the late 1960's (Berzins et al., 1971). This suggests little difference between institutionalized and outpatient addicts enrolled in the methadone treatment program. It is also clear that as a group, heroin addicts obtain profile elevations substantially higher than vocational rehabilitation clients, and seem to be in greater psychiatric difficulty. Because the 4-2-8 profile configuration has been shown to be not uncommon for nonheroin drug abusers, the He scale may have value in separating drug users from nondrug users, whatever the drug of choice.

Richman, Alex. Narcotic addicts, multiple drug abuse and psychological distress. In: National Academy of Sciences. Problems of Drug Dependence, 1975. Proceedings of the 37th Annual Scientific Meeting, Committee on Problems of Drug Dependence. Washington, D.C.: the Academy, 1975. pp. 1115-1123.

DRUG	Narcotics; Multi-Drug
SAMPLE SIZE	446
SAMPLE TYPE	Treatment (inpatient)
AGE	Not Specified
SEX	Both Sexes
ETHNICITY	White; Black; Hispanic
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	5

PURPOSE

Most descriptions of narcotic addicts are based on the treatment modality they sought, their demographic characteristics, their duration of symptoms, or the method of ascertainment. Few descriptions specify the problems, aside from narcotic addiction, for which clinical care may be needed. A study was made to determine the extent of concurrent substance use and psychological distress among narcotic addicts.

METHODOLOGY

A total of 446 narcotic addicts seeking inpatient detoxification during early 1973 at the Morris J. Bernstein Institute of the Beth Israel Medical Center were included in the study. The subjects were administered a drug-use questionnaire, as well as the Symptoms of Psychological Distress Section of the U.S. National Health Survey Medical History Questionnaire. This latter instrument consists of two questions which ask the subject to state whether he has had a nervous breakdown and whether he ever felt like he was about to have one.

RESULTS

The majority of the addicts reported regular, concurrent use of other substances for over 3 months. A minority (39%) denied daily use of additional substances (although less frequent use was common). Three distinctive drug-use patterns were evident: (1) narcotic use without daily use of additional substances (39%); (2) daily use of only 1 additional group: alcohol (17%), cocaine (11%), barbiturates, glutethimide, and tranquilizers (9%); and (3) daily use of more than one type of additional substance: 24% of the patients used two or more of alcohol, cocaine, barbiturates, glutethimide or tranquilizers. More women than men (37% vs. 21%) reported the daily use of barbiturates, glutethimide, or tranquilizers. Daily use of alcohol was more frequently reported by men (41%) than women (35%). Daily alcohol use was highest among blacks (50%) and lowest among whites (20%). Barbiturates, glutethimide, and tranquilizers were used most by whites (39%), and less by blacks and Hispanics (22%). Cocaine was used most by Hispanics (34%), least by whites (8%), and intermediate by blacks (24%).

Psychological distress was more frequently reported by the narcotic addicts than by the general population (as assessed by Dupuy et al., 1970). In the Dupuy national study, 3.2% of men and 6.4% of women reported a previous nervous breakdown; another 7.7% of men and 15.5% of women felt they were going to have a nervous breakdown. Among the study sample of narcotic addicts, 17% of men and 28% of women reported a previous nervous breakdown, and another 31% of men and 47% of women felt that they were going to have a breakdown. Pill users (barbiturates, glutethimide, tranquilizers) made up 25% of the patient population, and were more frequent among women, younger whites, those with multiple previous admissions, and concurrent users of alcohol. Daily use of pills significantly increased with the severity of psychological distress, from 13% of those denying breakdown or nervous trouble, to 25% of those with "impending" breakdown or "nervous trouble," to 46% of those with previous breakdowns (p<.05).

CONCLUSIONS

Any description or classification of narcotic addicts must consider psychological distress and multiple drug abuse. Psychological distress is correlated with the concurrent use of pills among narcotics addicts. This triad of problems has major significance for the care of individual patients, for evaluating the outcome of treatment prevention, and for assessing changes in the characteristics of patient populations.

Stauss, Fred F.; Ousley, Nancy K.; and Carlin, Albert S. Psychopathology and drug abuse: An MMPI comparison of polydrug abuse patients with psychiatric inpatients and outpatients. Addictive Behaviors, 2:75-78, 1977.

DRUG	Multi-Drug
SAMPLE SIZE	269
SAMPLE TYPE	Treatment (inpatient); Treatment (outpatient)
AGE	Adults (range 21-35)
SEX	66% Male; 34% Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Seattle, Washington
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	MMPI
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	9

PURPOSE

Recently there has been increasing attention paid to polydrug abuse. In contrast to much heroin research, which frequently characterizes opiate addicts as sociopathic, the polydrug users have been described as a profoundly disturbed group. The majority of conclusions about polydrug patients are based on clinical observation and on data gathered by the Federal Polydrug Abuse Project; these statements are based on data generated from situations in which comparison groups have not been utilized. Therefore, it is difficult to determine the extent and type of disturbance exhibited by polydrug patients compared to other psychiatric patients. An investigation was undertaken to compare polydrug users and psychiatric patients using the MMPI.

METHODOLOGY

Subjects consisted of volunteer polydrug treatment patients (N=70), inpatient psychiatric patients (N=59), and two groups of outpatient psychiatric patients (N=70, for each group). All patients had taken the MMPI and were matched for age and sex. Patients were between the ages of 21 and 35, and two-thirds were male.

RESULTS

The MMPI profiles generated by the four groups differed significantly ($p<.001$). Both polydrug patients and inpatients produced MMPI profiles that were more elevated than those of the outpatient groups. All four groups had mean T-scores over 70 on the D, Pd, Pt, and Sc scales. The inpatient and polydrug groups also had mean scores greater than 70 on the F and Ma scales, while the inpatients had an additional score greater than 70 on the Pa scale.

CONCLUSIONS

The data indicate that polydrug patients can be considered a markedly disturbed group of individuals who are more similar to psychiatric inpatients than outpatients. Inpatients and polydrug patients display similarities on the mean number of scores greater than 70 and on many of the clinical scales. Such results suggest that for polydrug users, psychiatric difficulties should be a major focus of treatment.

Weissman, Myrna; Slobetz, Frank; Prusoff, Brigitte; Mezritz, Marjorie; and Howard, Pat. Clinical depression among narcotic addicts maintained on methadone in the community. American Journal of Psychiarty, 133(12):1434-1438, 1976.

DRUG	Methadone
SAMPLE SIZE	106
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults (mean 27)
SEX	75% Male; 25% Female
ETHNICITY	53% White
GEOGRAPHICAL AREA	Connecticut
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics; Interviews; Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	22

PURPOSE

The presence of depressive symptoms in opiate-addicted individuals has received clinical mention but little systematic study. There is an interest in depression in the individual receiving methadone maintenance treatment for opiate addiction because the presence of depressive symptoms can contribute to the use of compensatory outlets, to higher attrition, and to difficulty in discontinuing methadone. An attempt was made to examine the frequency and nature of depressive symptoms and social functioning in a cohort of methadone-maintained patients.

METHODOLOGY

Subjects consisted of 62 consecutive first admissions and 44 patients who had been in maintenance treatment for an average of one year at the Methadone Maintenance Clinic of the Drug Dependence Unit at the Connecticut Mental Health Center at Yale University. Subjects were predominantly young (mean age: 27), male (75%), white (53%), and from the lower social classes (81%). Basic demographic, psychiatric and drug history information was collected. Clinical status was determined by clinician rating and patient self-report. Clinician rating included the Raskin Depression Scale and the Hamilton Rating Scale for Depression. Self-report data were collected on the Hopkins Symptom Checklist. Social functioning was assessed on the Social Adjustment Scale. A life-history interview was also administered.

RESULTS

A substantial number of the patients (64%) reported a history of mental illness in their parents or siblings, usually depression in the mother (14%) or alcoholism in the father (12%). Fifty-four percent of the subjects had a history of psychiatric treatment, with 24% of this group reporting that they had received treatment before their addiction problem. Forty percent of the patients reported prior alcohol abuse problems. According to the Raskin Depression Scale criteria, 32% of the patients were clinically depressed. Comparing the depressed and nondepressed patients, it was found that the depressed patients more frequently had a history of alcohol abuse than did the nondepressed patients ($p<.05$). The depressed patients also scored significantly higher ($p<.01$) on all symptoms assessed by the Hopkins Checklist, and almost all (at least at the .05 level) of the symptoms assessed by the Hamilton scale. The depressed patients showed significantly more impairment in overall social functioning ($p<.001$) than did the nondepressed patients. Depressed patients had also experienced a significantly higher total number of life events in the previous six months and perceived the events as more stressful ($p<.05$).

CONCLUSIONS

The data indicate that a substantial minority of methadone-maintained patients are clinically depressed as assessed on standard rating scales of depression. One should be cautious in generalizing the findings, however, because the patients studied were primarily white, young, and Catholic and, as such, may be different from typical opiate addicts. The combination of depression and drug addiction, and at times alcohol abuse, creates a high risk of suicide. Because of this risk, depressive symptoms require early detection and special treatment in the addict population. Some evidence suggests that the reduction of the secondary symptoms of depression with psychotropic drugs may offer an additional therapeutic modality, but further testing is required.

Westermeyer, Joseph, and Walzer, Virginia. Sociopathy and drug use in a young psychiatric population. Diseases of the Nervous System, 36(12):673-677, 1975.

DRUG	Multi-Drug
SAMPLE SIZE	100
SAMPLE TYPE	Treatment (inpatient)
AGE	Adolescents; Adults (range 15 - 25)
SEX	55 Male; 45 Female
ETHNICITY	4 American Indian; 4 Black; 1 Asian; 91 White
GEOGRAPHICAL AREA	Minneapolis, Minnesota
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics; Psychiatric Assessment
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	22

PURPOSE

Recent studies have consistently demonstrated a higher-than-expected proportion of heavy drug users among psychiatric patients. However, none of the reports states what might account for this constant finding. In order to examine this question more closely, 100 young psychiatric inpatients were studied in detail at the University of Minnesota Hospital over a 15-month period.

METHODOLOGY

A total of 45 female and 55 male psychiatric inpatients between the ages of 15 and 25 were included in the study. Most (91) were white, 4 were black, 4 were American Indian, and 1 was Asian. In order to assess what factors might lead to heavy drug usage among these patients, extensive drug histories together with demographic and clinical data were obtained. It was hypothesized that sociopathy might occur with heavy drug usage; thus, information was collected regarding truancy, runaways, pregnancy out of wedlock, divorce or prolonged separation from spouse, vehicular accident while intoxicated, and felony.

Heavy drug usage was defined as including at least one of the following use patterns during the year prior to admission: (1) alcohol intoxication 3 or more times a week; (2) daily cannabis use; (3) recreational use of any other illicit drug on more than 3 occasions during the previous year; and (4) nonprescribed use of any prescription drug on more than three occasions during the previous year.

RESULTS

A total of 51 of the patients were tabulated as not having used drugs heavily in the year prior to their psychiatric admission. Forty-nine had used drugs heavily prior to admission. Twenty-eight of the heavy users had used three or more categories of drugs, plus sedatives, hydrocarbons, cocaine, and narcotics. Fifteen patients had been using two of the following drugs: cannabis, other hallucinogens, alcohol, and amphetamines. Only six of the heavy users had used only one drug: marihuana (3 patients), alcohol (2 patients), and amphetamines (1 patient).

The heavy users were more apt to be unemployed, while the other patients were more apt to be going to school or employed full or part-time. These occupational differences were statistically significant ($p<.02$). Heavy users did not differ statistically from other patients for age, sex, race, or marital status.

Psychiatric assessment also failed to separate the two groups of patients. There were comparable numbers of functional psychosis. In all, the heavy users' diagnoses included more psychosis and character disorder; the other patients' diagnoses included more psychoneurosis. Presenting complaints did not vary in a significant way for the two groups, although there was a trend for the other group to have more "suicide attempts and gestures" (13 cases vs. 7 from the heavy users), and more "assaultiveness or fear of harming others" (6 cases vs. 2 cases). The heavy users had more "bizarre or inappropriate behavior" (15 cases vs. 6 cases) and more "drug effects" such as ataxia, confusion, and withdrawal (4 cases vs. no cases). Equal proportions of both groups had previous psychiatric treatment (nearly 39% of each group).

A significantly greater proportion of the heavy users had prior social problems ($p<.005$). Nineteen of the heavy users had experienced problems with felony, truancy, runaways, out-of-wedlock pregnancy, divorce or separation, and vehicular accidents. Five of the other patients had experienced trouble with felony and truancy. Anamnestic data from patients with heavy drug use revealed that drug use appeared to begin well before sociopathy in only one case. In several cases, problematic social behavior predated drug usage, but most frequently the heavy drug use and social problems began within weeks or months of each other.

CONCLUSIONS

Unexpectedly, the extent of drug usage did not distinguish young psychiatric patients along most demographic and clinical variables. The data failed to demonstrate that heavy drug use might predominate among males and among those with nonpsychotic diagnoses. However, heavy drug use was strongly correlated with problematic social behavior. The findings contrast with the common belief that heavy drug use precedes and, in fact, causes problem behavior. Rather, the data suggest that, among young people, the major psychiatric disorders are frequently found in association with heavy drug use and sociopathy, and that all three of these behaviors are often overlapping or coexisting.

Addict Lifestyles

Carlson, Katherine. Heroin, hassle, and treatment: The importance of perceptual differences. Addictive Diseases, 2(4):569-584, 1976.

DRUG	Heroin
SAMPLE SIZE	Not Specified
SAMPLE TYPE	Treatment; Treatment program personnel
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Honolulu, Hawaii
METHODOLOGY	Ethnographic
DATA COLLECTION INSTRUMENT	Interviews; Observation
DATE(S) CONDUCTED	1973 - 1974
NO. OF REFERENCES	5

PURPOSE

An important aspect of the addict's lifestyle is "hassle." Research was conducted on this aspect of the heroin addict's life, using the ethnographic approach applied specifically to the addicts' view of addiction in relationship to the use of treatment programs.

METHODOLOGY

Informal interviews, a card-sorting task, casual conversations, and participant observation of addicts in treatment were used to collect information. Addict informants came from one of five treatment modalities in Honolulu, Hawaii, including an outpatient detoxification program run by a free clinic, two inpatient detoxification programs (one using detoxification with methadone, the other a short-term experimental project using acupunture), a methadone-maintenance program, and Narcotics Anonymous. Observations, brief interviews, and card sorts were also done with treatment personnel at these modalities. The research period lasted for approximately one year, beginning in the fall of 1973.

RESULTS

To an addict, "hassle" comprises those aspects of drug use which get in the way of the maintenance of his habit, and which make his addiction itself maladaptive for him. The addict groups different hassles together according to similarities of origins and to the way they are experienced. The addict is always acting to deal with hassle and to reduce its occurrence in his everyday activities; but when the level of hassle becomes too high to be resolved by general behaviors, he has several other options which can also temporarily reduce hassle. Eventually, most addicts deal with hassle by going to treatment.

The addict's reason for going to treatment is always for the resolution of hassle, but for some this hassle is seen to be so severe that further heroin use is no longer possible. For such individuals (who stay clean after treatment), treatment provides a way out of a situation which has become intolerable, and which they do not believe can be otherwise unless they cease using heroin. Other addicts feel that the major portion of their hassle can be relieved by treatment, and they can return to heroin use at a level which is adaptive. These addicts are perceiving heroin as being potentially separate from hassle. This separation is sufficient to make continued use of heroin worth it, in spite of the hassle which will eventually recur. After they leave treatment programs, many of the informants expressed the intention of again using heroin, some immediately. Although one-third of the people talked to claimed that they would not use heroin again, none claimed that they would not like to. Those who said that they would not use were avoiding heroin because of the hassle they knew they would experience. If there was some way heroin could be removed from the hassle, then they would gladly use it. Addicts who have discontinued their heroin use may be doing so because their perception of this relationship reveals that heroin and hassle are no longer inseparable. They differ because of their hassle tolerance and hassle accumulation. Nonaddicts, however, including most treatment personnel, tend to see heroin and hassle as maintaining the same interrelationship throughout the addict's career in heroin.

CONCLUSIONS

The fact that treatment can be utilized by addicts to maintain their heroin use does not mean that this is the only purpose it serves. Treatment is also the most likely avenue for the individual who does want to discontinue drug use and change his lifestyle. Also, while treatment may facilitate addiction in the short run, over a longer period it helps bring the addict to the point of rehabilitation sooner. The availablity of such programs, and this apparent misuse of them, makes it more likely that addicts will reach the heroin/hassle unification earlier than in the past and thus have a promise of a viable and productive nonaddict future.

Catton, Katherine, and Shain, Martin. Heroin users in the community: A review of the drug use and life-styles of addicts and users not in treatment. Addictive Diseases, 2(3):421-440, 1976.

PURPOSE

Most information on heroin abusers has come from persons in treatment. To generalize from treated users to all users could result in a distorted idea of the lifestyle of the typical heroin user. In order to obtain information on heroin users outside of treatment, a literature review was conducted. The focus was on examining the users' own views on heroin and its use; only empirical research concerning heroin users in North America and Britain was included.

SUMMARY

North American Heroin User in the Community

Chein (1964, 1966, 1969) studied heroin use among slum-dwelling New York City male teenage drug users. He enumerated four stages of involvement with narcotics: experimentation, occasional use, regular use, breaking the habit. Chein found that many users of heroin were occasional users only, and that many stopped heroin use completely after a few years. He also noted that although about half his sample of 80 users expressed concern about their heroin use, severe withdrawal symptoms following abrupt termination of use were rarely observed. Chein believed that the most sought-after effect of drugs was not the positive euphoric high but the detachment it provided the user. Through his involvement with narcotics, the addict gained an identity and peer acceptance in a subculture; he acquired a career at which he was reasonably competent, becoming devoted to maintaining his supply, avoiding the police, and ritually taking the drug. For alienated individuals, drugs were attractive to the extent that their use was condemned by conventional society.

Fiddle (1967) studied New York City addicts and concluded that addiction gave the user a daily schedule and filled the void in an otherwise meaningless life. By acting as though he were part of an elite culture, by maintaining his cool style and fine clothes, the addict insulated himself from the realities of conventional society. Finestone (1957) interviewed 50 male black heroin users in Chicago, and determined that their lifestyle represented a unique social type--the "cool cat." Hustling (a nonviolent means of making money that did not require work) was highly valued; regular work was disdained. Great emphasis was placed on getting "kicks"; clothes and music were important symbols of a cool cat's status. Sutter (1966) identified the "righteous dope fiend." Status was allocated according to the size of a person's habit and his success as a hustler. All hustlers sought conspicuous wealth, luxury and leisure time, and scorned regular work. Blumer (1967) saw the heroin user as a "player" who viewed life as a racket and saw himself as a slick operator.

Preble and Casey (1969) studied slum-dwelling New York City addicts; these users were not escapists. They engaged in "meaningful" activities and relationships seven days a week. Almost all of the users engaged in criminal activities to support their habits. Legitimate work would not provide sufficient remuneration; like the ordinary criminal, the addict criminal tended to specialize in certain activities with the type and success determining his social status. The successful robber or burglar was highly respected. Like Chein, these authors felt the lifestyle of the heroin user was assumed, at least in part, in retaliation against injustices of slum life. Feldman (1968) found that to be a "stand-up cat" on the street, a user needed to take on the toughest challenges--and heroin provided the ultimate test. As an initiate moved further into the heroin subculture, a "cool" demeanor became more important than being "tough." These users saw drugs in terms of status and prestige; they engaged in daring and dangerous behavior not as a result of anomie but to enhance their reputation on the street.

Glaser et al. (1971) developed a theory to explain heroin use called the "relative deprivational-differential anticipation" theory. It was hypothesized that the typical addict had greater aspirations than others of similar background, and, because he aspired more, was more frustrated. Drug use gave him a sense of belonging and achievement which he couldn't achieve if he behaved conventionally. Stephens and Levine (1971) examined the addict subculture, and found that it provided the user with all that was necessary to succeed in the heroin addict role. The subculture was the source of the drug, the knowledge of how to obtain money and heroin, and the knowledge of how to administer and evaluate the drug. It also taught skills to the addict criminal and provided him with partners in crime. In addition, it provided him the respect and admiration he needed.

Hughes and Jaffe (1971) studied a Chicago copping community. The notion that dealers pushed their goods proved to be a myth--rather, it was a seller's market. Seven possible roles existed in the copping community: (1) the big dealer, who supplied the street and part-time dealers; (2) the street dealer, who sold directly to the consumer; (3) the part-time dealer, who supplemented his income by hustling or working, and who moved in and out of the dealer role; (4) the tout, who acted as a liaison between the dealer and consumer; (5) the bag follower, usually an attractive woman, who attached herself to a dealer to support her habit; (6) the hustler, who supported his habit basically by shoplifting; and (7) the worker, who was involved in legitimate employment at least part of the time, but also hustled. The roles addicts assumed most frequently were part-time dealer, hustler, and worker.

Gould et al. (1974) observed heroin users in a moderate-sized city in order to get the user's perspective on heroin. Heroin users had fairly positive feelings about the drug; for ghetto residents, heroin offered a chance at a fast good life. The chipper (one who uses but is not dependent on heroin) used heroin for fun, but still had to learn the importance of connections--whom to trust and whom to avoid. As a person moved deeper into heroin use, he severed more and more of his straight obligations and turned to hustling. Goode (1969) gives some perspective on the heroin phenomenon in the middle class. He believed that wide drug experimentation was viewed in college as adventurous and prestigious, but that the addict was scorned as having lost his cool. In a later study, Goode (1973) found that with heroin, experimentation usually led to a discontinuance of use and much less commonly to addiction. Powell (1973) also studied middle-class users, and found that these individuals had no tendency to organize their lifestyle around obtaining heroin. Many found the drug scene distasteful and rejected it; most often they used heroin with friends and liked it for its relaxing qualities. Generally these people were more concerned with their own personal pleasure, more adventurous and rebellious, and gave little thought to the future and their direction in life. Gay et al. (1973) studied chippers in San Francisco who adopted the classic heroin lifestyle although they were not addicted. They used heroin to gain self-esteem; they achieved a sense of excitement from the illegality and a feeling of accomplishment and prestige. Even though not junkies, they wanted others to think they were.

British Heroin User in the Community

De Alarcón and Rathod (1968) studied heroin users in Crawley. Like in America, heroin was not pushed, but rather initiation occurred with friends and was a sharing phenomenon. Their population was young (15-20), but did not form any delinquent subculture; most worked regularly, all were living with their parents, and their social backgrounds were similar to those of other families in the area. In contrast to the United States, James (1969) found little relation in the United Kingdom between heroin addiction and social class or ethnic group. However, like their American counterparts, they were above average in educational potential, but poor in achievement; few had a stable employment background. James and d'Orban (1970) reported further that these addicts used heroin in combination with other drugs and also used other drugs separately.

Kosviner et al. (1968) found that more than half of the addicts in a particular British community were from higher social class backgrounds, 37% were employed, and 19% were students. No drug pushing was found; rather, there was a system of cooperative rotation in sending friends to London to obtain drugs. Zacune et al. (1969) again emphasized friendship patterns, stating that the social network played a major role in both starting and continuing heroin use. Zacune, Mitcheson and Malone (1969), studying the same community, found that there was a fragmentation in friendship patterns after the 1968 change in the law, which required that heroin prescriptions be dispensed only by an official government containment unit. It was concluded that the previous friendship patterns were based only on the need to obtain drugs.

CONCLUSIONS

The lifestyle and social aspects of heroin use may be at least as important for its users as the physical satisfactions it provides. The chipper phenomenon indicates that highly motivated individuals have little problem controlling their drug use or shunning the addict lifestyle. Lifestyle appears to be crucial for the continuation of heroin use. The sense of belonging to a group, the feeling of purpose and accomplishment, and the sense of prestige are all important needs which this life appears to fulfill for the user.

Cheek, Frances E., et al. From heroin to methadone--social role changes and reinforcement differentials in relation to outcome on methadone. Part I. The study of reinforcement differentials. International Journal of the Addictions, 11(4):659-679, 1976.

DRUG	Heroin; Methadone
SAMPLE SIZE	30
SAMPLE TYPE	Methadone Patients
AGE	Adults
SEX	26 Male; 4 Female
ETHNICITY	13 White; 17 Nonwhite
GEOGRAPHICAL AREA	New Jersey
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Observation
DATE(S) CONDUCTED	1970 - 1971
NO. OF REFERENCES	6

PURPOSE

Clinical observations and reported interviews with addicts suggest a dramatic deterioration of social roles as the heroin user progresses in his addiciton. Ultimately, he may reach a point at which he derives minimal social and material reward from his family, occupational, or peer group roles, and little gratification from his drug use. Moving into methadone maintenance, the former addict's lifestyle may again alter markedly, but in a more conventional direction. With attempts at change, the former addict may experience previously unattainable positive reinforcement. To date, no careful and detailed examination of the differences in the lifestyle of the heroin addict and the methadone patient has been made, nor has there been any attempt to look at the kinds of reinforcement available to the addict in either situation, or their significance. Reinforcements available to the addict in five critical stages of his career, and their relevance to his success on methadone maintenance, were studied. It was hypothesized that the more negative and fewer positive reinforcements obtained during late heroin use, and the fewer negative and the more positive reinforcements obtained while on methadone use, the greater the likelihood of success on methadone maintenance.

METHODOLOGY

All subjects who participated in the study, which took place during 1970 and 1971, were or had been associated with the methadone maintenance program at the New Jersey Neuropsychiatric Institute. With the aid of a social worker from the Drug Unit and records of each patient's progress on methadone, the 132 patients associated with the program 6 months or more were rated for their performance on methadone. They were classified into three outcome groups: successful (Group A), marginal adjustment (Group B), and failures (Group C). Thirty persons, 10 from each of the three outcome groups, were included in this study. There were 4 females and 26 males; 13 whites and 17 nonwhites; 43% were between 30 and 39 years of age, 16% were 40 years old or more, and 41% were under 30. Each subject was interviewed for information in five areas: (1) demographic data; (2) family background, early history, and lifestyle; (3) drug use, specifically early and later; (4) methadone maintenance; and (5) general views of addiction and its treatment. Examined in depth were the reinforcements available to the addict in five critical stages of his career: early family life, and the preheroin, early heroin, late heroin, premethadone, and methadone maintenance periods. Reinforcement included role models as well as social, material, and physical rewards of both a positive and a negative nature. Reinforcement was coded as positive or negative when the particular addict saw and reported it in that way.

RESULTS

The study hypothesis was confirmed. Group A, the successful group, showed, in general, most negative reinforcement from the family area, most positive reinforcement from the environment, and least from drugs. In childhood there was greater negative reinforcement than in other age groups from family and from lifestyle, and higher positive reinforcement from the environment; in preheroin use, greater negative reinforcement from family, lifestyle, and drugs; in early heroin use, higher negative reinforcement from deviate peers and drugs, and higher positive reinforcement from the environment; in late heroin use, higher negative reinforcement from the family, from deviate peers, and from lifestyle; in the period of methadone maintenance, greater positive reinforcement from the environment.

Group B, the moderately successful group, showed most negative reinforcement from self. In childhood, there was higher negative reinforcement from deviate peers and from drugs, and lowest negative reinforcement from family; in preheroin use, there was higher negative reinforcement from deviate peers; in early heroin use, higher negative reinforcement came from families and lower negative reinforcement came from lifestyle; in late heroin use, highest negative reinforcement was from drugs, and lowest from families. In the period of methadone maintenance, highest negative reinforcement came from the family.

Group C, the failures, showed least negative reinforcement from self, from the family, and from lifestyle. In childhood they received the lowest negative reinforcement from families, and the highest from drugs; in preheroin use, the lowest negative reinforcement from families again appeared; in early heroin use, on the other hand, they received the most negative reinforcement from families; however, in late heroin use, once again the least negative reinforcement from families was reported. In the period of methadone maintenance, they received the lowest negative reinforcement from families and the highest negative reinforcement from deviate peers, from lifestyle, and from drugs.

Group A showed a pattern of higher initial negative reinforcement in many areas, followed by higher positive reinforcement on methadone. Group B also showed more negative reinforcement prior to treatment but continued to show negative reinforcement afterwards. Group C was low in negative reinforcement earlier, while negative reinforcements were high after treatment. In the late heroin and methadone periods alone, Group A had the largest number of high ranks of negative reinforcements (N=4) during the late heroin period and the lowest number (N=0) during methadone maintenance. Group C had the largest number of low ranks of negative reinforcements (N=6) and the fewest high ranks (N=0) in the late heroin period, as well as the fewest low ranks (N=1) and the most high ranks (N=4) of negative reinforcement during methadone maintenance.

CONCLUSIONS

Although the study was exploratory in nature, the findings appear to support the hypothesis tested. If, indeed, differentials in reinforcements available at various time periods do relate to the outcome of the treated addict, it would be very important to relate this to the therapeutic process. The therapist might, for example, attempt to point out to those who, like Group C, have not seen their past as extremely negative, that in fact its long-term consequences are quite negative. At the same time, the positive aspects of the treatment situation and the "straight" life might be emphasized.

Dudley, Donald L.; Mules, Janet; Roszell, Douglas; Glickfeld, Gail; and Hague, William. Frequency and magnitude distribution of life change in heroin and alcohol addicts. International Journal of the Addictions, 11(6):977-987, 1976.

DRUG	Heroin; Alcohol
SAMPLE SIZE	116
SAMPLE TYPE	Heroin and Alcohol Addicts
AGE	Adults
SEX	Male
ETHNICITY	93 White; 23 Nonwhite
GEOGRAPHICAL AREA	Washington
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics; Questionnaire
DATE(S) CONDUCTED	1973 - 1974
NO. OF REFERENCES	6

PURPOSE

A previous study (Dudley et al., 1974) showed a very high magnitude of life change in heroin and alcohol addicts. It was felt that such life change could act as a causal factor in perpetrating addiction and complicating treatment. To further examine this issue, a study of the frequency and magnitude of life change in two Veterans Administration Hospital addiction groups was made.

METHODOLOGY

Two Veterans Administration Hospital addiction populations--66 male alcohol addicts and 50 male heroin addicts--were studied. Alcohol addiction was defined by the Diagnostic and Statistical Manual of Mental Disorders (1968), and as 10 or more years of alcohol abuse combined with a high score on the ALCADD (Manson, 1949; Murphy, 1956). Heroin addiction was defined as a minimum of two years of documented intravenous heroin use. All subjects were currently participating in a rehabilitation program; of the heroin addicts, 43 were on methadone, 4 were abstinent, and 3 were being detoxified at the time of the study.

The frequency and magnitude of life change in the year prior to testing was measured with the Schedule of Recent Experience (SRE). The SRE, a self-administered questionnaire, documents life change in Life Change Units. It is composed of 42 life events, each of which has an assigned numerical value. Total LCU is an approximation of total social change or environmental disruption, and is positively related to the probability of organ failure. Differences and similarities between the two addiction groups were tested with the use of Pearson's Correlation Coefficient and Student's T-test.

RESULTS

The average age of alcohol addicts was 46 and the mean age of heroin addicts was 31. This was significant at the .001 level. The two groups were also different racially, with the heroin group containing 20 nonwhites but the alcohol group only 3 nonwhites. Both addiction groups were composed of lower-middle- and lower-class males.

Both the alcohol and heroin groups were found to have very high life-change scores. LCU scores for the alcohol and heroin groups were 649 and 783, respectively; the difference in scores was not statistically significant. The correlation between the frequency of occurrence of individual life-change items when compared to heroin and alcohol addiction was 0.83. The correlation between the magnitude of life change when compared to both addictions was 0.85. There was a very close association between the items which contributed to the high life-change scores in alcohol and heroin patients. In addition, the frequency and magnitude of life change were highly correlated. The top 10 ranked items in magnitude contributed 54% and 55% of the total life change to the alcohol and heroin groups, respectively. Seven of these 10 were identical in the two addictions: major personal illness, detention in jail, change in health of family member, marital separation, change in residence, change in financial state, and change to a different line of work. Change in arguments with spouse, sexual difficulties, and death of a close family member were included in the alcohol top 10; death of a close friend, change of living conditions, and outstanding personal achievement were in the heroin top 10.

The top 10 ranked items in frequency contributed 46% and 51% of the total frequency of life-change event occurrence in the alcohol and heroin groups, respectively. Seven items in the top 10 were identical in the two addictions: major illness, change in residence, change in living conditions, minor violations of the law, detention in jail, change in financial state, and change in sleeping habits. Change in eating habits, change in arguments with spouse, sexual difficulties, change in health of family member, and change in social activities were present in the alcohol high frequency group (making a total of 12 items in the top 10); vacation, change in working conditions, and mortgage less than $10,000 were present in the heroin high frequency group. Seven of the top 10 in terms of frequency were also in the top 10 in terms of magnitude in the alcohol group. Five of the top 10 items in terms of frequency were also in the top 10 in terms of magnitude of occurrence in the heroin group.

CONCLUSIONS

Current techniques for measuring magnitude and frequency of life change provide the researcher and clinician with an estimate of the amount of environmental disruption being experienced, and further localize the areas in which the disruption is occurring. Therapeutic measures aimed at reducing life change may serve to reduce the need for the addictive substance as a coping mechanism. It may be necessary to substitute other nondisruptive behaviors for the disruptive environmental changes if these changes are a necessary part of the addict's life and not merely a reflection of addiction.

Fiddle, Seymour. Sequences in addiction. Addictive Diseases, 2(4):553-568, 1976.

PURPOSE

A veteran addict raised in the streets can formulate a natural-history approach to addiction, a perception of recurrent patterned choices of ways and means of maintaining his habit. This situation is different from that of the young man who enters addiction after a childhood and preadolescence whose street life was not crucial, or was at least matched by some family intervention and discipline. These and other sequences in addiction were examined.

SUMMARY

Dynamics of Early Psychochemical Socialization

The teenager will insinuate himself into the addict culture by bribing, with parental money, an addict "old-timer" who offers him access to heroin. As the older man looks at it, the teenager is acting for nonaddicts, addicts, and other teenagers who are trying to get started; he is endured because he represents fresh capital to keep things moving in an addict society. An adolescent's youth represents enthusiasm, energy, agility, and gullibility--assets that can be useful to other addicts. The adolescent gets to feel that he is a consumption specialist in a world where everyone has to specialize, and discovers he can grow and work within the addict life, where there are productive work equivalents for the world outside. After he is arrested or imprisoned or goes to a hospital, he starts to feel that these periods of time spent away from the life are forms of payment, and are in some way productive for the addict culture. In these places, a young man finds that he learns about crime and addiction, which is another reason for him to feel that it is a productive experience. The young man feels he is playing, by treating heroin taking as an expression of free will, experiencing the thrill of breaking the rules and getting away with it, and getting involved in the tension of heroin taking. Heroin also takes a man out of the world by setting up a mood and posture not directly applicable to the routine world of human existence. The teenager defies the society of adults who would deny him his heroin.

Up and Down in Later Addiction

The street-oriented preaddict goes through these experiences earlier. He has his connections marked out for him because he in turn is more likely to be noted by his connections around the neighborhood. In contrast both to the street-wise and street-naive teenager are the men and women who begin using drugs in their twenties and thirties. Women may get into it through living with a male addict or through a history of prostitution, and in older men addiction may come about through emotional and sexual involvement with a female addict. A special subtype of this kind is the man who may have used drugs some as a teenager, stopped for no reason, then resumed drug use at a much later age. In general, these late-starting men and women are more likely to have some history of work experience, and to continue working for a period of time to support their habits.

Occupational Sequence in Addiction: Still Later Stages

A general principle of addict street life is that an addict generally cannot depend on following the same hustle through his addiction. His survival lies in his flexibility as an addict. The typical occupational shifts among male and female street addicts (thief, burglar, pimp, prostitute, etc.) confront the addict with material changes and force him to face the necessity of making choices. There are likely to be individual differences in the way the man or woman makes his or her key choices.

CONCLUSIONS

It should be noted that throughout the occupational sequences, the addicts going through changes are not mindless robots. They have rejected collective ideas as well as personal reflections and reactions about what is happening to them and to others. They are also continually assessing chance as an element in deciding how to act, in everday situations, toward those who come into their lives. Further, reciprocity principles help explain the sequential trend that has brought addiction a new notoriety and a new collective representation: violence in the streets. Failures in reciprocity, at least as they are seen by the addicted, justify and motivate reprisals at individuals, both as known violators of fair play and as symbols of a society which has violated these norms. Much of the interaddict violence springs from sellers purveying completely adulterated bags as heroin, or from addicts stealing from pushers; but much of it also springs from their feeling that society's laws are unfair to them. With heroin growing both weaker and more expensive, addicts get angrier and more violent. Thus the old collective representation of the addict as a nonviolent man, which always made the error of equating addict behavior with the alleged psychopharmacological properties of the drug, has been eroded in the past decade, with the resort to violence fitting into one or another of the sequences.

Greene, Mark H. The resurgence of heroin abuse in the District of Columbia. American Journal of Drug and Alcohol Abuse, 2(2):141-164, 1975.

DRUG	Heroin
SAMPLE SIZE	Not Specified
SAMPLE TYPE	Treatment; Incarcerated; Fatalities
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Washington, D.C.
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics; Police Records; Laboratory/Examination; Medical Examiner Records
DATE(S) CONDUCTED	1969 - 1974
NO. OF REFERENCES	21

PURPOSE

Drug abuse authorities in Washington, D.C., have studied the dynamics of heroin addiction through the systematic, prospective collection of heroin use trend data. The District of Columbia Drug Abuse Surveillance System has detected an increase in heroin abuse, and data are presented here to support this assertion; the implications of these observations with regard to the natural history of heroin addiction and the efficacy of various intervention strategies are discussed.

METHODOLOGY

Data were collected prospectively from the following sources: (1) patients entering treatment with the Narcotics Treatment Administration (NTA) heroin addiction treatment program; (2) urine testing programs for heroin in three locations (NTA Central Medical Intake, the D.C. Superior Court Lockup, and the D.C. Jail); (3) D.C. Medical Examiner's reports on deaths due to acute opiate overdoses; and (4) D.C. Metropolitan Police data on property crime, narcotics arrests, heroin seizures, and undercover heroin "buys" at the street level. A street level buy was defined as one in which no more than $50 was spent by the police agent, no more than 500 milligrams of material (only a fraction of which is heroin) are present in each package, and for which the calculated cost of heroin per milligram of pure heroin is less than $10. In addition, national data on laboratory analyses of heroin specimens were provided by the federal Drug Enforcement Administration (DEA).

RESULTS

The average purity of heroin purchased at the street level by narcotics squad undercover agents on a quarterly basis from mid-1969 through the end of 1973 showed a highly significant downward trend ($p<.001$). However, five consecutive points outside the 95% confidence band around this trend line suggest that the purity of street level heroin increased significantly during 1974. Death rates from heroin-related overdoses showed that all cases had morphine and quinine identified at postmortem toxicologic analysis. The heroin overdose death rate declined steadily from mid-1971 through mid-1973; however, there were 18 heroin-related deaths in 1974, compared to 5 during the entire year of 1973. That most of the deaths occurred among long-term heroin users, rather than among opiate-naive experimenters, is supported by the high average age of these victims: during 1971-1973, the average age of heroin overdose death victims was 25; in 1974, 27.4 ($p<.05$). There was a highly significant downward trend in the detection of heroin (morphine and/or quinine) in the D.C. Superior Court through the third quarter of 1973 ($p<.01$). The demand for services at NTA peaked during the first quarter of 1972, during which an average of 33 heroin users were admitted for treatment each day; the nadir of demand for treatment services was reached in the last quarter of 1973, with an average daily admission rate of 9 patients. However, treatment demand began to rise again in 1974 (average of 12 patients admitted each day during the last quarter of 1974).

There was a sharp decline in heroin seizures from 1971 through the end of 1973; during 1974, there was a small but statistically insignificant increase in the proportion of heroin seizures. The number of opiate charges made by the D.C. police reached a peak of 3,114 in 1971, and declined to 2,108 in 1972 and to 958 in 1973. Based on data available, 900 opiate charges were estimated for the entire year of 1974. There was a parallel between trends in heroin use and reported property crime in the District of Columbia; property crimes peaked in 1969 and declined steadily in the following three years. In 1974, when heroin use began to increase again, property crime in Washington increased for the first time since 1969-1970. Also, as the purity of heroin increased, the number of reported burglaries increased, with a highly significant positive correlation between these two variables ($p<.01$). To the extent that increased heroin potency is associated with increased prevalence of heroin use, there was an expected increase in the number of crimes normally committed by addicts when heroin potency rose.

In order to determine whether the increased level of use reflected the return of former heroin users to habits, or whether this increased level reflected the creation of new heroin users, the distribution of year of first heroin use was found to be a good indicator. The modal year of first heroin use was 1969, with a steady decline in the number of those who reported onset of heroin use in subsequent years. This suggests that the increased level of heroin use documented by the prevalence indicators was not associated with an increase in the incidence of heroin use. Further corroboration of this apparent increase in the prevalence of heroin use without a concomitant increase in the incidence of new heroin use was provided in an analysis of the age trends among patients first admitted to NTA. The age distribution among these admissions substantiates the contention that incidence is low. The mean age increased steadily from 1972, after the peak of new use had passed (1972, 25.1 years; 1973, 26.7 years; 1974, 27.7 years).

CONCLUSIONS

Data collected through a prospective Drug Abuse Surveillance System have suggested that the rate of heroin abuse is rising in the District of Columbia. Similar trends have been documented in at least two other major American cities (Newmeyer, 1974; Raynes, 1974). This increase in the prevalence of heroin use in Washington has not been associated yet with an increase in new heroin use, although increased incidence of new heroin use was described in both Boston and San Francisco. The increase in heroin use appears to be associated with the development of a new heroin distribution system, which is supplying brown heroin (largely of Mexican origin) to areas of the country that were previously dependent upon European white heroin. These data indicate the need for a reassessment of both the treatment and law enforcement strategies currently advocated, particularly with respect to the philosophy which underlies these approaches. It is possible that new ways of conceptualizing the problems of drug abuse and new intervention strategies will be required if the heroin problem is to be reduced and its negative consequences held to a minimum.

Hendler, Harold I., and Stephens, Richard. The addict odyssey: From experimentation to addiction. International Journal of the Addictions, 12(1):25-42, 1977.

DRUG	Opiates
SAMPLE SIZE	30
SAMPLE TYPE	Treatment
AGE	Adults (median 22)
SEX	Male
ETHNICITY	17 Black; 10 Puerto Rican; 3 White
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	November-December, 1973
NO. OF REFERENCES	9

PURPOSE

A growing area of narcotic addiction literature has focused upon addiction as a process. Several authors have suggested life-cycle or process models as a framework for understanding how people become addicts. However, most studies have dealt with the period when the subject has already become addicted. In this study, an attempt was made to explore the "honeymoon" period in the addict's life, extending from his first use of narcotics to the point of his addiction.

METHODOLOGY

A sample of 30 male former narcotics addicts was selected from the resident and graduate population of a large New York City drug treatment program. Seventeen of the respondents were black, 10 were Puerto Rican, and 3 were white. Their median age was 22, with a range from 16 to 26. All the subjects were interviewed and were asked to describe what occurred in critical areas of their lives (family, friends, school, work, and drug use) during the period extending from their first use of narcotics until their addiction.

RESULTS

The subjects were primarily adolescent ghetto dwellers from New York City. Nearly three-fifths of them reported being involved in nondrug-related criminality prior to their narcotics use. Four-fifths of the respondents had used marihuana or hashish, with a small percentage using other drugs. A third classified themselves as heavy alcohol users prior to their first use of narcotics. The great majority (87%) had friends who were heroin users.

Peers exerted great influence on the respondents' initial use of narcotics. Over half of the sample reported that social acceptance was the primary reason for their first use of narcotics. An additional 20% cited curiosity as the major motivating factor for their first use of narcotics. Only 5 individuals stated that the reason they first tried heroin was related to the anticipated effects of the drug itself. When describing their first experience with heroin, almost 75% said it was unplanned. In other words, they did not report deliberately seeking out heroin. These data lend support to the hypothesis that heroin was a drug on the scene and the respondent every once in a while encountered a situation where use was possible and socially sanctioned.

The second experience with heroin occurred usually very soon after the first experience. One-third of the respondents reporting using again on the same day or the following day; one-quarter waited at least a month before trying narcotics again. Again use was almost always in the company of others and snorting was the predominant route of administration. When asked why they used narcotics again, more than two-fifths cited their previous enjoyment of the "high" they experienced. A third still cited social acceptance as their reason for use. While about half reported nausea after their first experience with narcotics, after the second experience, three-fifths reported a "high" unmarred by any unpleasant side effects.

The honeymoon period with narcotic drugs begins with the first euphoric experience with the drug and ends at the point when the user realizes that he is hooked. For most addicts, the honeymoon period is relatively short; 70% of those interviewed were addicted within 1 year of their first use of narcotics. More than half of this group reported they were hooked in less than 6 months.

The pattern for route of administration during the honeymoon period showed that more than two-thirds of the subjects began their use of narcotics using the "snorting" technique and that by the time of their addiction, over 75% used the intravenous method. Though many respondents reported being tricked or coerced into "mainlining," others sought out this method because they desired the increased pleasure that those using the intravenous method appeared to be experiencing.

Prior to addiction, one-fifth of the sample reported that they used funds obtained primarily from legal sources such as jobs or parents. One-third reported depending on a combination of legal and illegal sources of income, and nearly two-fifths stated they derived money from illegal sources such as selling drugs or stealing. Almost all subjects reported that substantial changes in at least one area of their life situation occurred during the honeymoon period. Nearly two-thirds reported changes in their friendship groups, either avoiding or being avoided by nonnarcotic users or moving to a group that was more heavily involved in narcotics use. Only one-fifth stated that their parents were aware of their narcotics use during this period; parents usually tried to pressure the user to stop using drugs, which often increased hostility between the user and his family. Three-fifths of the respondents who were in school either dropped out, were expelled, or lost interest in school. Of those working during the honeymoon period, four reported being fired, others developed negative attitudes toward work, and some began stealing on the job. Two-thirds cited some change in their sexual relationships; half stated their narcotics use enabled them to contain their ejaculation for long periods of time, allowing them to give more pleasure and to feel more "manly." Over two-thirds reported having a steady girlfriend, with more than three-quarters stating that their girlfriends did not use narcotics. Four-fifths described changes in their drug-use patterns, with over half stating they decreased their use of other drugs. Nearly two-fifths stated they increased their use of other drugs after becoming involved with narcotics; some used other drugs to create a different type of high.

When asked why they continued their use of narcotics up to the point of their addiction, two-fifths reported that they "liked the high." More than a third reported they continued use in order to remain a part of the crowd. Despite the fact that over 75% reported seeing addicts suffering from withdrawal sickness, few believed that it would ever happen to them. Two-thirds also reported that they had no fear of arrest during the honeymoon period despite knowing at least one person who was "busted" for drug-related crime during this period. Only 1 out of 30 individuals perceived that their drug use was a problem prior to their addiction. When asked how they came to know that they were addicted, only 40% said they recognized the classical withdrawal symptoms, while one-third reported that their friends had informed them that they were hooked. When asked their reaction to the realization of being hooked, over one-third reported

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being unhappy or afraid, but they had resolved to continue their use. One-fifth said they were happy to be addicted because it meant they were now full participants in the "street addict scene."

CONCLUSIONS

The neophyte user discounts the risks of involvement in the drug life. Although some respondents acknowledged that there was some real risk, they felt in the long run nothing too terrible would happen to them. They felt they would not overdose, get "strung out," or get arrested because they were too skillful to get entangled in any of these problems.

Nace, Edgar P.; Meyers, Andrew L.; Rothberg, Joseph M.; and Maleson, Franklin. Addicted and nonaddicted drug users. Archives of General Psychiatry, 32(1):77-80, January 1975.

DRUG	Heroin
SAMPLE SIZE	101
SAMPLE TYPE	Military
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Questionnaire
DATE(S) CONDUCTED	1970 - 1972
NO. OF REFERENCES	7

PURPOSE

Studies have indicated that multidrug use patterns are characteristic of current drug usage, whether experienced marihuana smokers or heroin addicts are studied. An attempt was made to determine whether or not drug-usage patterns, prior to the onset of heroin addiction, distinguish the addict-to-be from his nonaddicted peer.

METHODOLOGY

Between December 1970 and January 1972, 101 active-duty enlisted U.S. Army personnel were interviewed at four different army posts in the United States. The criteria that determined a patient's inclusion were: (1) each subject was an active duty enlisted man who was being seen (in a mental hygiene facility) for reasons related to drug abuse; and (2) the patient was available to participate in the interview and testing procedures during the time the interviewers spent at the clinics. Each soldier was interviewed individually in a semistructured manner for about 1½ hours, and additional time was spent completing paper and pencil tests. For those with a history of heroin addiction, initial addiction was operationally defined as that month in which the subject reported onset of heroin use three or more times a day, continuing for several months, or the subject reported subsequent withdrawal symptoms, or both. Sixty-eight of the 101 subjects were determined to have had a history of addiction while in the service. Thirty-three subjects had no history of heroin addiction.

RESULTS

The addicts and nonaddicts proved to be very similar on demographic characteristics and other nondrug use variables including age, education, socioeconomic status, and military rank.

All reported drug use was reduced to six categories: marihuana (including hashish); hallucinogens; amphetamines; barbiturates; narcotics; and "other" (glue, cough syrup, etc.). Significantly more nonaddicts used "other" drugs more than ten times, while significantly more addicts used marihuana more than fifty times and barbiturates more than one hundred times. The addicts used 2.4 different drug categories as civilians, and 4.8 drug categories in the military; the nonaddicts, 2.9 as civilians, and 4.4 in the army. Overall, the addict used 5.1 drug categories and the nonaddicts, 5.0. No significant differences were found between the addicts and nonaddicts in age at onset of first drug use (addicts 15.8 years; nonaddicts, 16.3), age at first narcotic use (addicts, 18.8 years; nonaddicts, 19.1), or length of time from onset of first drug use to onset of narcotic use (addicts, 31.6 months; nonaddicts, 35.9). Considering those nonaddicts who experimented with a narcotic (N=23), no difference was found between this subgroup and the addict group with regard to the number of drug categories used before first narcotic use (addict, 3.1; nonaddict, 3.7), nor in the number of individuals in both groups who used at least one other drug heavily prior to first narcotic use. No meaningful differences were found between addicts and nonaddicts with regard to the order in which drug categories were used. Of 36 comparisons (six drugs in six locations), only one (number of subjects using barbiturates as a fifth drug) reflected any difference between addicts and nonaddicts. Overall, the nonaddicts progressed more rapidly (but not significantly so) through the entire possible sequence from drug one to drug six. Those addicts using all six drug categories (N=35) took 47.2 months to use all six, while the nonaddicts using six drug categories (N=17) took only 38.3 months. No significant difference existed between the proportion of addicts (59 of 68) and of nonaddicts (31 of 33) who used a "soft" drug (marihuana, glue, cough syrup, or inhalant) as their first drug. Also, no difference existed in time between use of successive drug categories for those addicts and nonaddicts who used a soft drug first. Type of first drug used had no effect on the total number of drugs used by the addicts and nonaddicts or on total time from onset of drug use to onset of narcotic use, but it did affect the total number of drugs used prior to a narcotic. Those nonaddicts who initiated with a "soft" drug used significantly more drugs before a narcotic than did the addicts who initiated with a "soft" drug ($p<.05$). When an age split was made, based on age of onset of drug use, dividing both addicts and nonaddicts at age 16 years, the nonaddicts in both age groups used drugs more extensively and progressed more rapidly from one drug to the next.

When drug use was examined on a monthly basis over a 60-month period, differential trends emerged between the addicts and nonaddicts. The group that became addicted to heroin sustained their higher level of drug use resulting from the introduction of heroin, whereas the group that avoided opiate dependency returned within four months to the level of drug use existent prior to initial narcotic use.

CONCLUSIONS

Measurements such as variety of drug used, order of use, age of onset, and the rapidity with which different drugs are introduced, provide very little discrimination between multidrug users who become addicted to heroin and those who do not. The substantial variation in drug usage patterns within the two groups resulted in essentially no meaningful discriminatory patterns between them prior to the onset of narcotic use. From a methodological point of view, time may be better spent focusing on environmental contingencies, and social or psychodynamic factors rather than drug-taking behavior itself.

Stephens, Richard, and Cottrell, Emily. A follow-up study of 200 narcotic addicts committed for treatment under the Narcotic Addict Rehabilitation Act (NARA). British Journal of Addiction, 67:45-53, 1972.

DRUG	Opiates
SAMPLE SIZE	200
SAMPLE TYPE	Posttreatment
AGE	Adults
SEX	Male
ETHNICITY	108 White; 58 Black; 34 Spanish
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Longitudinal--Follow-up
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1969
NO. OF REFERENCES	11

PURPOSE

A major part of the narcotics literature has dealt with the growing number of follow-up studies of narcotic addicts who have undergone treatment. Common study areas include relapse rates and their relation to age, length of addiction, employment, race, and education. These areas were investigated, and the results compared to the findings of other follow-up studies.

METHODOLOGY

The sample consisted of 200 male addicts who were committed to and completed inpatient treatment at either of the two federal drug treatment hospitals located in Lexington, Kentucky, and Fort Worth, Texas, under the NARA program. The subjects were studied 6 months after hospital release. Two questionnaires were sent to each patient's aftercare counselor. One was to be completed by the counselor and one by the patient (by and large, most of the data were supplied by the counselor). Relapse was defined using a fourfold classification which indicated the quality of the patient's subsequent experience with drugs. Each patient was classified as "readdicted," "using regularly," "using occasionally," or "abstinent."

RESULTS

Of the 200 subjects, 13% remained completely free of narcotics use for a minimum of six months. Another 10.5% used narcotics illegally only a few times, while 12% were fairly regular users but did not become addicted. Of the total sample, 64.5% became readdicted, and 87% had reused narcotics to some degree. This latter finding is consistent with many other follow-up studies, which have shown that about 80%-90% of the addicts in their samples used narcotics, to some extent, within 6 months after release.

Because of Winick's maturation theory of addiction, length of addiction and age have become important variables in the relapse literature. In this study, there was no consistent relationship between age and relapse. However, using the fourfold classification of relapse, it was found that many more of those under 30 used narcotics regularly or became readdicted. Conversely, more of those over 30 years of age used irregularly or remained abstinent. These differences were statistically significant at the .05 level of confidence. This trend among older addicts to taper off their drug use could be directly related to Winick's idea that older addicts tire of the drug life, and "burn out." However, the relationship between length of addiction and relapse as discussed by Winick was not borne out by the data. Slightly more persons addicted for 10 years or less were abstinent and slightly less were readdicted, giving no support to Winick's hypothesis that the longer the addiction, the greater the likelihood of abstinence.

Although many of the follow-up studies report the employment status of their subjects, it is difficult to determine the temporal relationship between employment and relapse. In this study, it was clearly determined whether the patient had a job before his relapse. The data indicated that 81% of those patients who had a job relapsed, whereas over 94% of those patients who were unable to obtain a job relapsed. This difference was significant at the .01 level. Thus, the ability to obtain a job definitely seemed to be related to whether or not a patient returned to drug use.

Previous studies have indicated that the relationship between race and relapse is unclear. This study concurred with this finding. While whites did have the lowest relapse rate (84.3%), the relapse rate for the ethnic group with the highest relapse rate (blacks) was only 7% higher. This difference was not statistically significant.

In concurrence with previous studies, it was found that those persons with a college degree (or an equivalent type of training) relapsed less than others. However, those with a high school diploma or some college education relapsed almost as often as did the less educated subjects. In fact, if education is split at the median of 10 years and the resulting distribution tested, there is no significant relationship between education and subsequent drug status.

The major reasons for relapse supplied by the counselor (with percentage of patients for whom that reason was given) were: "problems with family or girlfriend" (31%); "craving of narcotics" (29%); "the patient's weak or inadequate personality" (27%); "the influence of addict friends and environment" (23%); and "the patient's frustration or depression" (17%). Although the reasons supplied by the subjects were the same in general, their order of importance was reversed. The reason which emerged as most important in determining relapse was the enjoyment of narcotics (49%). The second and third most cited reasons were the alleviation of stress and the attempt to combat one's own faults and depression (25%).

The major reasons for abstinence, according to counselors, were: "the patient's desire to stay clean" (62%); "effectiveness of therapy" (19%); "support of the family" (15%); and "fear of the consequences of continued involvement in the drug life" (15%). The patients cited the same reasons in the same order.

CONCLUSIONS

These findings shed some light on Winick's maturation hypothesis. Although an earlier relationship was established between age and relapse, these findings indicate that neither age nor the effects of the drug life seem to be directly supported as reasons for abstinence among those over 30 years of age. Although this test was only a crude attempt at testing Winick's hypothesis, it does indicate that more conceptual work must be done before an adequate test of the idea can be attempted.

Stephens, Richard, and Smith, R. Copping and caveat emptor: The street addict as consumer. Addictive Diseases, 2(4):585-600, 1976.

DRUG	Heroin
SAMPLE SIZE	30
SAMPLE TYPE	Street Addicts
AGE	Adults (mean 26)
SEX	Male
ETHNICITY	16 Black; 8 White; 6 Hispanic
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	9

PURPOSE

One of the most important events in a street addict's daily routine is copping--the acquisition of heroin. Despite its central importance, little attention has been given to the ways in which addicts cop drugs. In order to determine how the addict attempts to find and purchase the highest-quality drugs available, and how he protects himself in a marketplace which is rife with sellers' opportunities for cheating, a group of 30 street addicts was studied.

METHODOLOGY

The sample was drawn from a population of male subjects adjudicated as narcotics addicts by the courts and committed to the New York Drug Abuse Control Commission during the period of June to December 1973. For this study, experienced street addicts were sought who were maximally involved both in drug use and in hustling. The 30 subjects consisted of 16 blacks, 8 whites, and 6 Hispanics; their median age was 26 years, with a range of 21-43. The subjects were interviewed for information on how they obtained drugs, how they checked for quality, how they avoided getting "burned" (cheated), and what their responses were to being "burned."

RESULTS

According to the subjects, there were two major techniques for obtaining the best heroin; the one most frequently mentioned was the practice of using the same dealers most of the time; the other was "shopping for the best drugs," which entailed a complicated series of events. In using the same dealer or dealers over a period of time, an element of trust is built up between the two parties. Both know what to expect from the other, and when the expectations are not fulfilled, the buyer is in a better position to confront a regular dealer about the poor quality of heroin he has purchased. In shopping around, one of the most commonly used ways of finding the best heroin is to utilize the street informational system called the "wire." The wire is composed of a network of persons in the subculture. These persons appear to be some of the more experienced addicts in the street scene, or persons who have some kind of personal tie to the buyer. Less trust is given those who have vested interests in the information they provide. Another method of obtaining drugs is through the use of the "tout," a person who appears to support himself, at least partially, through pointing addicts in the direction of certain street dealers; sometimes they buy drugs for an individual. They are supposed to know the "streets" and the best available deals at any point in time. A third method of obtaining the best heroin is by going to specific copping areas in the city, particularly some areas of Harlem, which have the reputation for having the best quality heroin.

Respondents differentiated between the generally poor quality of heroin everywhere, and the "burn." It would appear there are at least two elements to the burn: (1) extremely low-quality heroin (sometimes a bag containing no heroin at all); and (2) mens rea, in that the seller is deliberately giving the buyer a lower quality than is necessary. The most important way of avoiding the burn is to use trusted people, but the buyer can protect himself by employing various strategies. One strategy is to purchase a small amount of heroin and "taste" it (inject a small quantity) before buying a larger quantity. Another more frequently mentioned technique is to hold the seller, whether he be a tout or dealer, responsible for the quality of the drug by threatening violence if the buyer is burned. Another method of protection is to affect indifference, and still another is to time the cyclical nature of the dealer's movements such that a buy can be made immediately after the dealer has obtained his drugs.

There are at least three different kinds of response to being burned. The one most frequently mentioned is for the buyer to return to the seller and in some manner demand recompense: more heroin, or a refund of money. When a regular dealer is employed and a long-term relationship established, the procedure is usually an amicable one. Sometimes, when the purchaser particularly distrusts the seller, he might demand his money back by "making a scene," or threatening to do so. A second technique often used is to discontinue the relationship with that particular dealer. A third technique is to retaliate against him, either by giving the seller a "bad wire" (put the word out that the dealer is selling inferior drugs), by "setting-up" a dealer for a "rip-off" (some respondents noted that they would rob a dealer who had wronged them), or by reporting the dealer to the police.

CONCLUSIONS

One major theme seems to emerge from the data--namely, the great amount of overlap between the consumer behavior patterns of the street addict and the "legitimate consumer" who shops for food, clothing, and other commodities. Street addicts utilize many of the same strategies in purchasing drugs as would a consumer in a more legitimate business transaction. The addict shops around for the best heroin either by going to a "trusted" dealer or by using the informational network to determine who has the best product for sale. If he is dissatisfied with the heroin and feels that he has been wronged, he will utilize many of the same techniques as the legitimate consumer, including returning to the dealer for cash or replacement. And while he cannot take the dealer to court, he nevertheless can use the law by informing on the dealer. Further research is needed to determine who uses dealers and who uses touts, what "burn avoidance" techniques are used by whom, and what methods of redress are utilized under what circumstances, and by whom.

Suffet, Frederic, and Brotman, Richard. Female drug use: Some observations. International Journal of the Addictions, 11(1):19-33, 1976.

PURPOSE

Despite the vast amount of drug research performed by social scientists, relatively little attention has been given to assessing the distinctive features of drug use by females. This is rather curious since, from a sociological standpoint, differences in sex role are clearly important in determining the informal social controls placed on deviant behavior. The few studies that have been concerned with female drug use are reviewed here.

SUMMARY

There is little research specifically directed at ascertaining sex differences in the process of initiation into drug use. However, what literature exists suggests that, for the most part, females learn from males how to use drugs, no matter what type of drug is involved. For example, in his study of 266 white addicts, O'Donnell (1969) found that being married to an addicted male was highly correlated with later addiction in the wife, but that marriage to an addicted female did not lead to addiction in the husband.

Virtually all surveys comparing males and females on rates of illicit drug use show that males are more likely than females to be users. Chambers, in his 1970 survey of New York State residents, established the male-female ratio among persons who used various illicit drugs at least six times per month. He found that for each drug, the majority of such users were males. There is some evidence that the difference in rates is beginning to decrease, particularly among younger members of the population. Statistics of the New York City Narcotics Register as reported in 1973 showed that the proportion of females among new cases of narcotics use reported to the Register rose from 14% in 1968 to 25% in 1972 and the first half of 1973.

In contrast to the above-mentioned pattern, a number of surveys have shown that women are more likely than men to be users of psychotherapeutic drugs. For instance, Abelson and his colleagues, in their 1972 national survey conducted for the National Commission on Marihuana and Drug Abuse, found that the use rate of psychotherapeutics was higher among women than among men. They reported that among adults, 62% of the women and 50% of the men had used such drugs. They also found that males were more likely to use alcohol, and females were more likely to use pills when they turned to a substance for stress relief.

Regarding lifestyle, all studies have found that female drug users, despite the fact that they lead what is usually considered to be a deviant life, hold values that are remarkably traditional and conventional. Often they are forced into deviant behavior because they are isolated from normal sources of social and economic support. A study by the authors found that among a sample of 50 addicted females admitted to a detoxification clinic, 78% were unmarried, 50% had children, only 32% lived with a spouse or other relative, 66% had not completed high school, and 86% were unemployed. The pattern of more drug use among males than females is slightly altered among college students. Female students tend to subscribe to a freer or unconventional lifestyle, and their drug use patterns tend to approximate those of males. In 1967, Suchman surveyed students at a West Coast university. He found that, overall, 5% of the women, compared with 14% of the men, smoked marihuana at least once a week. But when lifestyle factors were taken into account, the difference in use rates decreased. For example, among students who approved of premarital sex, 33% of the women and 34% of the men smoked marihuana. The general finding was that, for both sexes, belief in unconventional values was associated with higher rates of drug use.

CONCLUSIONS

It seems probable that the use of recreational drugs by women will increase. Assuming that this type of drug use is closely tied to a more liberated lifestyle, it is reasonable to predict that as women assert their right to greater freedom in their private lives, a larger proportion of them will use marihuana and other such drugs.

The assumption is that the stresses experienced by women are for the most part produced by their sex role and their unequal status vis-a-vis men; the use of pills is a way of suppressing the symptoms of this condition, but is not a way of fundamentally correcting it. The use of psychotherapeutics serves, intentionally or not, as a device for perpetuating women's unequal status. To the degree the women's movement achieves social equality for women, thereby alleviating the strains associated with their sex role, the rate of pill use would be expected to decline.

Tokar, John T.; Brunse, Anthony J.; Steffler, Volney J.; Sodergren, John A.; and Napior, David A. Determining what heroin means to heroin addicts. Diseases of the Nervous System, 36(2): 77-81, February 1975.

DRUG	Opiates
SAMPLE SIZE	71
SAMPLE TYPE	Treatment (outpatient); Volunteers
AGE	Adults (mean 34)
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Los Angeles, California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	13

PURPOSE

The epidemiology of drug use relating narcotics, delinquency, and social policy has been well documented, and numerous investigators have discussed personality and addiction. An attempt was made to describe the personalities of heroin addicts from their own vantage point, using instruments borrowed from descriptive semantics. Specifically, the study sought to: (1) determine the place of heroin in the conceptual frames of reference of heroin addicts and nonaddicted controls; (2) establish a classification procedure for determining subtypes of heroin addicts; and (3) demonstrate the usefulness of a linguistically based instrument in clinical psychiatry.

METHODOLOGY

The heroin addict sample consisted of 20 subjects admitted to the methadone maintenance program at the Sepulveda Veterans Administration Hospital. Their mean age was 36 years; their mean number of years of addiction was almost 17. The normal controls consisted of 51 subjects from local schools, churches, civic groups, and from the Department of Employment.

Interviews with the addicted respondents led to the selection of 21 representative sentences containing the word "heroin" or a synonym. The word "heroin" and its equivalents, such as "drugs" and "my habit," were eliminated from the sentences, and the sentence frames placed along the left-hand margin of a data matrix. The word "heroin" and its synonyms, together with investigator-selected words, were placed along the top margin of the matrix. The investigators chose words which they thought nonaddicted controls might insert in the sentence frames. Each of the 71 subjects completed the matrix indicating whether he agreed with the sentence formed when each of the words was inserted in each of the 21 sentence frames.

RESULTS

At the 84th percentile level, the controls said that they derived enjoyment from life, friends, love, and helping others. These things, plus their work, made them happy. They also said they derived enjoyment from sex. All the heroin addicts agreed that their "sickness" was "drugs." At the 84th percentile level, they agreed that drugs or heroin, or both, "erased the pressures," "helped them to relax," "was all life seemed to be," and "made them do wrong things." They readily admitted to having "had a problem with" drugs, and that their "sickness" was their "habit," "drugs," and/or "heroin." "Helping others" made them happy, and they reported that "money" made life easier. The words "heroin," "drugs," "my habit," and "money" accounted for the major differences between the addicts and the normal control group.

The addicts were easily frustrated and made anxious. In their own words, drugs, heroin, medicine, money, smoking, alcohol, and marihuana erased the pressures, got rid of the problems, and made life easier. In addition, heroin "closed the world out." "Their own strength" was not great enough to "erase the pressures."

Narcotic addicts did not get enjoyment from "accepting responsibility," "friends," "life," "work," or "love." They said "life," and "love," did not "make them happy." They said they were not able to "cope with and accept responsibility," and did not get enjoyment from responsibility or work. The addicts had a weakened sense of personal identity. They were unable to enter into prolonged, close, friendly relationships, and they did not get enjoyment from friends. Friends made them do wrong things and did not "make life easier" for them or "relieve their depression." Their "habit," "money," "drugs," "marihuana," and "heroin" gave them "status with their friends."

CONCLUSIONS

Normal control subjects tended to use a multiplicity of resources (i.e., life, work, love, friends, their own strength, and helping others) to handle their various needs of enjoyment, anxiety, meaning in life, depression, and illness; the heroin addict restricted himself to one resource, heroin, to meet all of the above needs. If treatment of heroin addiction consists of personality restructuring, then the treatment implications of this study are obvious. Heroin addicts use drugs to obtain satisfaction for many needs; normals use socially acceptable methods to satisfy the same needs. Not only must the drug be withdrawn or a substitution (methadone) given, but the patient must be taught new ways of coping with old needs.

Wesson, Donald R.; Smith, David E.; Lerner, Steven E.; and Kettner, Vernon R. Treatment of polydrug users in San Francisco. American Journal of Drug and Alcohol Abuse, 1(2):159-179, 1974.

DRUG	Multi-Drug
SAMPLE SIZE	109
SAMPLE TYPE	Treatment
AGE	Not Specified
SEX	61 Male; 48 Female
ETHNICITY	80 White; 16 Black; 13 Other
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Observation; Program/Clinic Statistics; MMPI
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

PURPOSE

In 1973, the Special Action Office for Drug Abuse Prevention began a series of pilot detoxification projects in 11 urban areas to examine the nature of nonheroin and nonalcohol drug problems. The West Coast Polydrug Abuse Treatment and Research Project was the first of these projects to begin operation. The San Francisco Project's primary purpose was to study polydrug abuse patterns, focusing on the abuse of stimulants and sedative-hypnotics in 17 counties located within a 100-mile radius of San Francisco, and to determine the need for detoxification facilities.

METHODOLOGY

On May 1, 1973, the San Francisco program began publicizing the availability of treatment services. Most patient referrals came from other drug programs or hospitals, and therefore tended to be a select population for whom traditional services had been unsuccessful. Detoxification was carried out either in one of two hospitals or on an outpatient basis. Barbiturate abusers were detoxified using a phenobarbital technique, while opiate dependence was treated with a methadone detoxification technique. After detoxification and drug use stabilization were complete, there was an attempt to place patients in existing drug treatment programs or appropriate residential facilities for extended aftercare and social rehabilitation. There was an effort to exclude cases in which alcohol or heroin alone was the only drug which was creating problems. Referrals were accepted from professionals, various community agencies, friends or relatives, or the individual patient.

Two patient populations were hypothesized: "streetwise" and "nonstreetwise," based primarily on lifestyle and relatively independent of socioeconomic status. Streetwise individuals were those individuals who had significant street experience and would be able to survive if put into the

Haight-Ashbury without economic resources. Nonstreetwise individuals were those who had no significant involvement in the youth street scene and would be lost if dropped into the middle of the Haight-Ashbury. Based on observation and MMPI profiles, the two groups were compared.

RESULTS

Approximately 70% of the patient poulation was streetwise. Unlike heroin abusers, the polydrug users composed at least two distinct subgroups: (1) the streetwise drug user who was most probably a male in his middle twenties who had used a variety of licit and illicit drugs including heroin; and (2) a population most commonly female, averaging ten years older than the usual streetwise male, and who generally began using a drug of abuse via prescription. The male-female ratio of the streetwise users was 1.6 to 1, whereas in the nonstreetwise population, the ratio shifted to a slight predominance of females. The composite male-female MMPI profiles were elevated in virtually all categories. In both, the female profiles were less disturbed than the male.

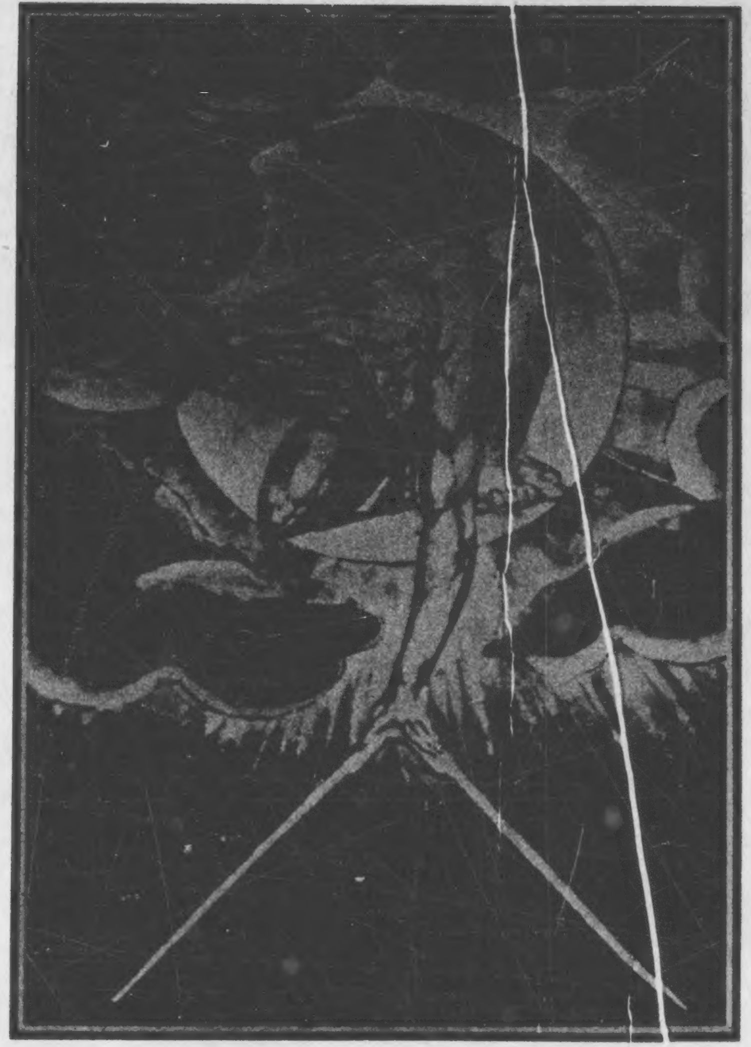
Following detoxification, 23 of the polydrug abuse patients were referred to therapeutic communities in the San Francisco area for aftercare treatment. Twenty-one of these patients were streetwise polydrug abusers and two were nonstreetwise. Most of these were white males with an average age of 26 years who had used drugs intravenously on a continuing basis for a long period of time, had failed in other treatment modalities, had been arrested previously, and currently were unemployed. Primary drugs used by this group were: barbiturates, 52.2%; amphetamines, 21.7%; alcohol, 13%; heroin, other opiates and synthetics, and hallucinogens, 4.3% each. Secondary drugs were depressants, with heroin, methadone, alcohol, and barbiturates accounting for 70% of this total. On admission, 60.9% of the patients referred to therapeutic communities were using three or more drugs on a regular basis. They showed a greater amount of psychopathology (as measured by the MMPI) than either the overall patient population or groups of heroin users of the same age. Of all patients with whom aftercare in a therapeutic community was attempted, only three remained for more than one month.

The West Coast Polydrug Abuse Project worked with methadone maintenance patients in a consultive or complementary fashion. Unfortunately, experience showed that a high percentage of the patients returned to methadone maintenance programs resumed their abuse of nonnarcotic substances. In some of the patients, total drug abstinence was an unrealizable and a destructive goal. Planning and experimentation was initiated in a variety of aftercare modalities for the polydrug abuse patient, including electrosleep, biofeedback, and Transcendental Meditation training.

CONCLUSIONS

Effective response to the polydrug abuse problem cannot be realized by utilizing the relatively limited and insulated technology developed in the heroin treatment field, but will require a broad, integrative, multidisciplinary approach, including the incorporation of medical, psychopharmacological and psychiatric disciplines which have not been well integrated into the drug abuse treatment field.

Employment



Bloch, Harriet I.; Ellis, Rosalind D.; and Spielman, Carol R. Use of employment criteria for measuring the effectiveness of methadone maintenance programs. International Journal of the Addictions, 12(1):161-172, 1977.

DRUG	Methadone
SAMPLE SIZE	37
SAMPLE TYPE	Methadone Patients
AGE	Adults (mean 30)
SEX	Male
ETHNICITY	8 Black; 20 Puerto Rican; 9 White
GEOGRAPHICAL AREA	New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	7

PURPOSE

There has been an increase in evaluation studies of methadone maintenance programs. One of the criteria chosen to represent success is employment. A study of methadone maintenance clients was undertaken to compare three measures which assess employment outcome: (1) a comparison of employment at point-of-program admission versus employment at point of evaluation; (2) a comparison of employment experience during the period from onset of addiction to program admission versus employment status at point of evaluation; and (3) a comparison of employment during the period from onset of addiction to program admission versus employment during the period of methadone treatment.

METHODOLOGY

A group of 37 male clients of the New York State Drug Abuse Control Commission methadone maintenance program were included in the study. All the subjects had participated in the methadone program for at least 2½ years; they had not absconded, been incarcerated, or been returned to a residential facility for violation of commission regulations. The mean age of the men was 30 years. Twenty clients were Puerto Rican, eight were black, and nine were white. Their mean length of addiction was 8½ years. Employment data were obtained through a chronological interview with clients, beginning with their first job after leaving school and extending up to the date of the interview, which served as the point of evaluation. Employment was defined as any period of continuous employment on one or more jobs each extending for six months or longer, enrollment in a vocational training program or college for six months or more, or service in the armed forces.

RESULTS

Point-in-Time Measure of Employment

Preliminary measurement indicated that at the point-of-evaluation interview, 29 of the 37 (78%) were employed. However, several clients were working only sporadically and did not display a history of work while in treatment. When adjusting for this fact, 26 clients (70%) were found to be employed. When comparing the percent of clients employed at the point of admission to the percent of clients employed at the time of interview, there emerged a 56% difference in proportions of the sample who were employed at point of admission (14%) and at point of evaluation (70%). While point-in-time comparisons of employment present a viable preliminary approach to evaluating program effectiveness, there are limitations to this method. For instance, using point of entry into a treatment program as an evaluation baseline will predispose success because the evaluator is using a point in an addict's career when his level of functioning is relatively poor and thus is not reflective of his previous experience.

Comparison of Period to Point-in-Time Measure of Employment

There was a 27% difference between the proportion of the sample considered to have a work history during the period from addiction to program entry compared to the proportion employed at time of interview. As many as 14 (88%) of the 16 clients considered to have a previous work history were employed at time of interview. More than half (12) of the 21 clients without a previous work history were employed at point of interview. These results indicate that this kind of comparison is critical to understanding the relative effect of treatment on employment.

Comparison of Period-to-Period Measure of Employment

The extent of clients' employment during the period from onset of addiction to program entry was compared to the extent of their employment throughout the period from program admission to point of evaluation. There was a 17% difference in the mean percents of time clients were employed during the two periods, with clients being employed 39% of the time during the first period and 56% of the time during the second period. Compared to period 1, in period 2 there was a 13% decrease in unemployment, and a 16% increase in the number of clients employed at least 50% of the time. While this last measure does not reflect the magnitude of program effectiveness, it presents the most comprehensive framework within which to assess both the extent of employment experience that clients bring to the treatment situation and the scope of their employment behavior during the treatment period.

CONCLUSIONS

The use of point-in-time evaluation measures which do not correct for predisposing factors operating prior to clients' admission to the program, i.e., previous work history, may inflate success rates. Similarly, the use of point-in-time measures to evaluate clients' employment status after they have undergone an extensive period of treatment may also predispose success. With these limitations, the findings suggest that a number of clients bring marketable skills with them to the treatment setting, and for these the program appears to have served as a catalyst to mobilize them to get and hold jobs. Furthermore, the program also seems to have had a beneficial effect on clients who had no history of work. When previous work history is controlled for, methadone maintenance treatment has differential positive effects on clients' employment status.

Crowther, Betty; Felkner, Larry; and McDaniel, Olin. Differences among medical professionals in their attitude toward drugs. International Journal of the Addictions, 12(1):43-52, 1977.

DRUG	Opiates
SAMPLE SIZE	154
SAMPLE TYPE	Medical Professionals
AGE	Adults
SEX	152 Male; 2 Female
ETHNICITY	White; Nonwhite
GEOGRAPHICAL AREA	Illinois; New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	16

PURPOSE

Sociological theories of drug use emphasize environmental elements as the major causal factors in the individual's initial and continued use of drugs. Psychological theories, on the other hand, suggest some type of personality defect that is manifested in the use of addicting drugs Both sociologists and psychologists, however, have had difficulty in explaining drug use among upper-income professional persons who in outward appearance seem relatively well adjusted An attempt was made to examine some of the characteristics of physicians that might lead to an explanation of the high rate of addiction among this group. It was hypothesized that the role of physician itself is at least a partial contributor to the high rate of addiction among physicians.

METHODOLOGY

Interviews were conducted with 54 physicians, 52 dentists, and 48 veterinarians in Illinois and New York. These professionals were chosen because they had relatively high access to opiates. Nearly all the subjects were males who had been practicing over 10 years in their profession. There was no difference between groups with respect to age or years of practice. Further comparisons between the three groups were made, based on the information obtained on the subjects' knowledge of, attitudes toward, and use of drugs.

RESULTS

Measures of occupational stress did not differentiate among the groups. Over 75% of the subjects in each group reported that they felt considerable stress in their profession. Although there was a slight tendency for physicians to express greater dissatisfaction with their occupation, there were no statistically significant differences between the groups. Physicians said that they were more likely to use drug samples than were the other professionals. However, 40% of the dentists, compared to 25% of the physicians and 23% of the veterinarians, reported illicit use of amphetamines to stay awake. Several questions were asked to determine whether or not physicians differed from the other professionals in their attitude toward drugs in general. The vast majority of all subjects agreed to the statement that drugs should be used only when absolutely necessary to relieve pain or cure disease. When asked whether they would use drugs to relieve stress, 45% of the physicians said "no." A significantly larger percentage of dentists and veterinarians thought that this was an acceptable use for drugs. Other questions dealing with illicit use of drugs in general did not yield differences among the groups. However, in regard to attitudes toward specific drugs, there were differences among the groups. Each subject was asked to indicate the extent to which each of 25 drugs was beneficial or harmful for self-medication. All professionals saw antibiotics as the most beneficial and least dangerous for self-medication. Opiates were seen as the most dangerous of all drugs. Physicians tended to see barbiturates as more beneficial and less dangerous than did the other groups. Each group placed penicillin and aspirin among the most beneficial drugs. Physicians were the only group to include an opiate in this category; they considered Demerol to be one of the five most beneficial drugs listed. Overall, there were statistically significant differences among the three groups on 17 out of the 25 drugs listed. Physicians saw the following drugs as more beneficial than did their professional colleagues ($p<.05$): Demerol, morphine, Librium, phenobarbital, aspirin, and coumadin. They saw as less beneficial ($p<.05$): Methedrine, Benzedrine, sulfanilamide, and streptomycin. Of the other four drugs--codeine, Seconal, prednisone, and terramycin--their rankings were in the middle. Physicians were significantly different than the others on each of the three opiates--codeine, Demerol, and morphine--with the exception of the comparison between dentists and physicians for codeine (dentists saw codeine as more beneficial). There were fewer differences between groups regarding the most dangerous drugs. Physicians saw Dilaudid and coumadin as more dangerous than did the other groups; they also saw phenobarbital and erythomycin as less dangerous ($p<.05$)

CONCLUSIONS

Professionals do differ regarding their attitudes toward drugs. In particular, physicians see Demerol, the most common drug used by physician addicts, as more beneficial than do the other groups. The fact that they listed this drug among the most beneficial of all drugs suggests that their perception of it is quite different from their perception of other opiates. It is probable that this perception plays a part in the physicians' willingness to self-medicate with the drug. Another finding that may have serious implications for illicit drug use is that physicians tend to see barbiturates as more beneficial and less dangerous than do the other groups. Although this attitude may or may not affect the physician's own use of the drug, it might have an impact on the use of it by the general public. Since people generally use drugs prescribed by their physicians, it would seem plausible that this positive attitude would lead to a greater use rate in the general population. Although the general questions asked during the interview did not elicit differences that might have been supportive of the study hypothesis, the fact that group differences were found with respect to specific drugs suggests that the physician role does play a part in the individual's attitude toward drugs. Refinement of questions on stress and other role characteristics might lead to a better understanding of the observed differences.

Lester, David; Narkunski, Abraham; Burkman, J. Herbert; and Gandica, Alfonso. An exploratory study of correlates of success in a vocational training program for ex-addicts. *Psychological Reports*, 37:1212-1214, 1975.

DRUG	Opiates
SAMPLE SIZE	51
SAMPLE TYPE	Treatment; Ex-addicts; Vocational Trainees
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaires; Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

PURPOSE

As part of a larger evaluation of a vocational and rehabilitation program for ex-addicts, personality and interest surveys were administered to 51 ex-addicts who participated in a vocational training program. An analysis of test results was made to determine which tests were most successful in differentiating between those ex-addicts who completed the program and those ex-addicts who failed to complete the program.

METHODOLOGY

Fifty-one male clients of a drug rehabilitation program were selected to participate in a 9-month vocational training program. Of these clients, 22 completed the program while 29 did not. Participants had been administered several tests, including the MMPI, the Edwards Personal Preference Schedule, the Omnibus Personality Inventory, the Revised Beta Examination, the Work Environment Preference Schedule, the Minnesota Vocational Interest Inventory and the Career Maturity Inventory, and the California Achievement Test. Test scores for program completers and noncompleters were compared.

RESULTS

The 22 ex-addicts who completed the vocational program did not differ in age or race from the 29 who did not complete the program. Completion of the training program for the ex-addicts was not associated with raw scores on any of the following tests: California Achievement Test, Edwards Personal Preference Schedule, Work Environment Preference Schedule, Omnibus Personality Inventory, Revised Beta, or the MMPI. The one test that significantly differentiated between those who completed and those who did not complete the program was the Career Maturity Inventory. Those completing the program obtained higher scores on self-appraisal (p<.05), planning (p<.01), and problem solving (p<.01).

CONCLUSIONS

Psychological tests were not useful in differentiating those who were successful in completing a vocational training program from those who were not. On the other hand, the Career Maturity Inventory did differentiate the two groups. The inventory has been shown to be useful in counseling normal populations of high school and college students. The present study indicates the usefulness of the inventory for work with more disturbed populations.

Malinowski, Frank A. Employee drug abuse in municipal government. Public Personnel Management, 4(1):59-62, 1975.

DRUG	Not Specified
SAMPLE SIZE	32
SAMPLE TYPE	City Personnel Directors
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	0

PURPOSE

Drug taking on the job has become a problem of major national importance in industry. Many studies have dealt with the abuse of drugs in business and industry, but there is no reference in the literature to the situation at the level of municipal government. In order to determine whether drug abuse is regarded as an employment problem in municipal government, personnel directors of 50 of the largest U.S. cities were surveyed.

METHODOLOGY

A 17-item mail survey questionnaire was sent to the personnel directors of the 50 largest U.S. cities, based upon the census population of 1970. The questionnaire obtained information on employment applicant and present employee drug abuse problems. Alcohol was excluded from the definition of drug. Out of the 50 municipalities surveyed, 32 returned sufficient information for analysis purposes.

RESULTS

Most of the respondents (59%) used some form of preemployment screening to detect drug abusers; physical examination was the main screening technique. Twenty-eight percent of the respondents stated they had formal guidelines for dealing with drug-abusing applicants. Applicants were not hired unless there was evidence of rehabilitation, and the job under consideration was outside the sensitive areas of police and fire service (56%). Several of the municipalities had experienced legal suits regarding the use of preemployment screening techniques to detect drug abusers, such as the use of the polygraph, but the cases were too recent to have had much effect upon agencies other than those actually involved in the litigation.

Regarding present employees, one-fifth of the respondents had established guidelines to deal with drug abusers. Suspension or actual termination was mentioned by one-fourth of the agencies, although usually some form of treatment or counseling was the first step. Many of the agencies left the decision up to the department in which the drug abuser was employed and took action only upon the department's request (69%).

More than one-third of the respondents stated they had some kind of educational training program dealing with drug abuse; most were offered to supervisors. Emphasis was placed upon the detection of drug abusers for referral to the medical examination process before the abuser proved dangerous to himself or to the agency so far as his work was concerned. Only thirty-one percent of the respondents said the same approach was used with drug abusers as was used with alcoholics. Alcoholism problems were often handled within the agency, while drug abusers were usually sent to a treatment program outside the agency. The majority of the respondents (66%) felt drug abuse was less of a problem than alcoholism; however, 56% identified the drug abuser as a problem employee. Only 1 out of 6 agencies felt that during the following two years, drug abuse would increase as an employment problem within their organization. Thirty-four percent of the agencies already had some kind of drug abuse educational training program, and approximately 2 out of 5 respondents without any current program indicated that they planned to institute one.

CONCLUSIONS

Drug abuse appears to be an employment problem of modest concern among municipalities, both for employment applicants and present employees. The legality of preemployment screening techniques to detect drug abusers has been challenged in the courts, but it is not yet evident what effect the results of litigation will have upon employers in the public sector.

Mangione, Thomas W., and Quinn, Robert P. Job satisfaction, counterproductive behavior, and drug use at work. Journal of Applied Psychology, 60(1):114-116, 1975.

DRUG	Not Specified
SAMPLE SIZE	1,327
SAMPLE TYPE	General Population; Employees
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	6

PURPOSE

Industrial psychologists divide work-related behaviors into two categories: those reflecting a worker's decision to participate in an employing organization, and those reflecting a decision to perform in the organization. In addition to such frequently studied behaviors as turnover and productivity, there are other indicators of a worker's having made the decision not to participate; one of these is drug use. A study was performed to test the hypothesis that drug use and other forms of "industrial sabotage" are symptoms of job dissatisfaction.

METHODOLOGY

Data were collected in the 1972-1973 Quality of Employment Survey, a national household survey of workers conducted by the Survey Research Center of the University of Michigan. The present analysis was based on a sample of 1,327 wage and salaried workers who were employed for at least 20 hours per week, and who were at least 16 years of age. Workers were interviewed personally in their homes; the interview included questions about work-related values, quality of employment, work-related problems, and reactions to jobs in terms of job satisfaction, self-esteem, depression, physical health, and life satisfaction.

RESULTS

The index of counterproductive behavior correlated negatively with job satisfaction ($p<.001$). Counterproductive behavior was also more prevalent among men than women ($p<.001$), and more prevalent among workers under 30 years old than among those 30 years old or older ($p<.001$). While drug use at work was significantly related to job satisfaction ($p<.01$), it was not related to either sex or age.

Since counterproductive behavior was related to job satisfaction, sex, and age, there remained the question of whether the relationship between job satisfaction and ccunterproductive behavior would persist when sex and age were controlled. To answer this, the sample was divided into four subsamples: men, 16-29 years old; men, 30 years old or older; women, 16-29 years old; women, 30 years old or older. For each of these subsamples a correlation was calculated between job satisfaction, the index of counterproductive behavior, each of the items making up the index, and the drug use at work item. Job satisfaction was significantly related to counterproductive behavior and drug use at work only among one subsample--men 30 years old or older.

CONCLUSIONS

The ecological inference tested in this study was supported, but for the "wrong" reasons, and was sustained only under circumstances irrelevant to the logic. This logic was based on two assumptions, one well documented, the other not. The first, and well-documented, assumption was that younger workers are less satisfied with their jobs than older ones. The second, less well-documented assumption was that counterproductive behavior at work and drug use at work are especially pronounced among younger workers. The resulting inference is that among individuals there is an association (perhaps causal) between job satisfaction and both counterproductive behavior and drug use at work.

The data indicated that this inference was supported only for a limited segment of the working population--men 30 years old or older. There was no support for the inference among the group that was so critical to the ecological logic--young workers, presumably male. Young workers did indeed exhibit the attitudes and behaviors often ascribed to them, but these attitudes and behaviors were unrelated. The inference generated a "correct" prediction of an association between attitude and reported behavior only where it was not expected to be found.

Morton, F.L. Employing ex-addicts: Determinants of support and opposition. International Journal of the Addictions, 11(4):681-694, 1976.

DRUG	Opiates
SAMPLE SIZE	83
SAMPLE TYPE	Treatment Personnel; Employers
AGE	Adults
SEX	48 Male; 35 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Westchester County, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	17

PURPOSE

In 1973, public hearings of the Temporary New York State Commission to Evaluate the Drug Laws concluded with a report which documented pervasive controversy and discrimination in the employment of rehabilitated or former addicts. To analyze local attitudes to this issue, the audience of a symposium in Westchester County, New York, on "Employment of the Ex-Addict," was surveyed. Assessed were the nature and extent of proponent views, degree of commitment, and motivational components of support and opposition.

METHODOLOGY

Questionnaires were administered to the 100 persons attending the symposium; 83 of the questionnaires were suitable for study. Respondents included 48 males and 35 females, the majority of whom were over 30 years of age and had a college level (or higher) education. More than half of the respondents were drug program personnel, 17 were persons in business or industry, and 1 person came from a labor group. The questionnaire obtained information on attitudes toward employing ex-addicts and on the various mechanisms toward achieving this goal.

RESULTS

Sentiment in support of the employment of rehabilitated addicts was substantial. More than 50% opted for a prompt increase, while slightly less than 50% favored a gradual increase. In regard to handling addict employment, 44% favored the formation of a county-wide council and 25% favored educational programs. Both choices were in the middle range of activism, between proposals for positive legislative action on the one hand and an irrelevant proposal of stronger drug control laws on the other.

Arguments were presented for and against employment of ex-addicts. The respondents were told to state which arguments were important. More than twice as many of their choices favored rather than opposed increased employment. The most popular arguments for employment were individual self-esteem (picked by 71 respondents), utilizing work potential (59), and ending bias (38). Against employment the rank was: poor attendance (32), spread of drug abuse (26), and lack of qualified applicants (23). Among positive arguments, those concerned with human rights were chosen as the most important. Among negative arguments, danger of economic loss and fear of the spread of drug abuse or crime were ranked higher than fear or prejudice. There was a strong correlation ($p<.01$) between proposed behavior and belief in urgency of need to employ ex-addicts; those who supported a prompt increase in employment were also more likely to support strong activist plans to accomplish this goal. Statistically significant associations were derived between urgency and the variables of age and plant size ($p<.05$); younger people (under 30) and persons working in small plants (under 50 employees) were less reluctant than those over 30 who worked in large plants to accept ex-addicts as employees. A statistically significant correlation was also found between urgency and occupation ($p<.001$); drug program personnel were more likely to urge for employment, while industrial personnel were the least likely to do so.

CONCLUSIONS

If commitment is considered to be a summation of belief and action, subjects signalled a clear concern with the issue. On the other hand, their projection of activism lagged somewhat behind the intensity of perception of the need to employ. Rather than choose measures of high activism, they chose moderate action. Among conferees, ideologic beliefs were judged to be important twice as often as economic arguments. Appeals to fear of violent crime or the spread of drug abuse were not found to be as important as concern for the applicant's qualifications or performance. This may seem surprising in view of the popular association of addiction and violent crime. It appears that fear and prejudice may have been overrated as perceived barriers to employment.

Powers, Robert J. The vocational maturity of inner-city narcotic addicts. Rehabilitation Counseling Bulletin, 17(4):210-214, June 1974.

DRUG	Opiates
SAMPLE SIZE	149
SAMPLE TYPE	Civilly Committed; Vocational Trainees
AGE	Adults (mean 24)
SEX	Male
ETHNICITY	91 Black; 33 Puerto Rican; 25 White
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Career Maturity Inventory
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	17

PURPOSE

Despite concern over the employability of narcotic rehabilitants, no attempts appear to have been made to determine whether addicts have less or more career maturity than their peers--and, hence, whether they would need a greater amount of vocational training and counseling. The present study attempted to determine whether addicts in rehabilitation settings have career attitudes as mature as those of their peers. In turn, an effort was made to compare the career attitudes of addicts and their peers with those of a normative sampling of students.

METHODOLOGY

Subjects of the study consisted of 103 male clients of a civil commitment narcotic rehabilitation program (Group 1) and 46 male members of a YMCA vocational training program (Group 2). About 64% of the rehabilitants were drawn from the abstinence treatment modality, and 36% were on a methadone maintenance program. Subjects in Groups 1 and 2 were matched for background characteristics: they came predominantly from disadvantaged areas of New York City; the majority of both groups were black (60 blacks, 18 whites, and 25 Puerto Ricans in Group 1; 31 blacks, 7 whites, and 8 Puerto Ricans in Group 2); and their mean age was similar (Group 1=23; Group 2=26).

Evaluation of the maturity of career attitudes was conducted using the attitude scale of Crites' (1971) Career Maturity Inventory. The attitude scale contains 50 true/false items arranged into 5 subscales assessing (1) conception of the vocational choice process, (2) involvement in the choice process, (3) preference for choice factors, (4) independence in decision-making, and (5) orientation toward work. The inventory was administered to Groups 1 and 2; published norms were obtained for the 7th- to 12th-grade Iowa students on which the instrument had been standardized.

RESULTS

With respect to their peers, inner-city narcotic addicts had significantly less maturity of vocational attitudes (p<.01). Addicts had less adequate response tendencies associated with career decision-making, suggesting they had less overall vocational development. In addition, both addicts and their peers had significantly less maturity of career attitudes than Iowa student norm groups (p<.01). This finding was in close agreement with results of several other studies with disadvantaged groups (Asbury, 1968; Cooter, 1966; Miller, 1963; Wilstach, 1967).

CONCLUSIONS

Crites (1973), in his hierarchical model of vocational maturity, noted that vocational choice attitudes co-vary with choice competencies, wisdom of choice, and consistency of choice. Addicts, then, in manifesting less fully developed vocational attitudes would be expected to have greater problems than their peers both in choosing an occupation and in adjusting to it. In view of the low vocational maturity level of addicts, efforts to place them in jobs may in many cases be premature. Though job placement is important, considerable attention is needed on development of vocational coping behaviors and attitudes. As Crites noted, culturally disadvantaged groups generally evidence less maturity of career attitudes than others; however, this does not mean that the attitude maturity of the disadvantaged individual cannot be increased, and available research indicates that it can be. Therefore, efforts to facilitate the vocational maturity of inner-city narcotic rehabilitants is well-founded.

Suffet, Frederic, and Brotman, Richard. Employment and social disability among opiate addicts. American Journal of Drug and Alcohol Abuse, 3(3):387-395, 1976.

DRUG	Opiates
SAMPLE SIZE	296
SAMPLE TYPE	Treatment (outpatient)
AGE	Not Specified
SEX	Both Sexes
ETHNICITY	137 Black; 98 Hispanic; 61 White
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

PURPOSE

One of the more complex problems in the treatment and rehabilitation of opiate addicts is employment. Among addiction treatment programs, work is generally regarded as an essential component of rehabilitation. It is also generally recognized that addicts, because of their addiction, face discrimination on the job market. To be labeled an addict is to suffer certain social disability. Of course, being so labeled is not the only social disability which addicted persons suffer in the labor market. Since addicts often come from disadvantaged groups in the population, they share certain other disabilities with nonaddict members of these groups. A group of addicts in treatment at the Multitrack Abstinence Program of the New York Medical College were studied to examine the types of disabilities they face and the effect these disabilities have on the chances of obtaining employment. It was hypothesized that rate of employment would vary inversely with number of disabilities.

METHODOLOGY

Clinic records for 296 treatment clients were included for analysis. Subjects consisted of 61 whites, 137 blacks, and 98 Hispanics; 139 (47%) had a high school degree, and 157 (53%) did not; 100 had never been arrested (34%), while 196 (66%) had a criminal record of at least one arrest. These three factors--race, educational level, and criminal record--were selected as three attributes which would be likely to count against a person in the job market. For purposes of analysis, the three attributes were treated as dichotomous variables. Race or ethnic background was dichotomized as majority group status (white) versus minority group status (black or Hispanic). Educational level was split into high school diploma versus no diploma. Criminal record was divided into never arrested versus arrested. Minority group status, no diploma, and an arrest record were considered social disabilities. The employment status of the subjects was then related to number of social disabilities. Employment was defined as working for wages full-time or part-time, or being enrolled in school or a vocational training program. At admittance to the program, 29% of the subjects were employed.

RESULTS

As expected, the rate of employment decreased as the extent of disability increased. The largest decrement occurred between the one- and two-disability categories (from 42% to 27% employed); that is, while an individual stood a reasonable chance of overcoming a single disability, the presence of a larger number seemed to effect a crucial reduction of one's employment chances. Most of the subjects fell into the two- or three-disability category (114 and 98, respectively; a combined total of 73%).

With this high disability rate, and the subsequent low employment rate, it was assumed the probability of engaging in illegal activity would increase directly with the extent of disability. As expected, the greater the number of social disabilities, the more likely the individual was to engage in illegal acts: 80% of those with 3 disabilities; 66% of those with 2 disabilities; 53% of those with one disability; and 39% of those with no disability.

CONCLUSIONS

The finding that the rate of employment is highest under conditions of least disability, and that the rate of illegality is highest under conditions of most disability, points to a central fact emerging from the data. That is, the character of one's economic relation to the world is not shaped merely by such psychological traits as "motivation" or "work orientation." It is shaped mainly by the limiting conditions--social disabilities--which determine one's employment chances.

Weimar, Robert H. A state-wide survey of drug issues in industry. Southern Medical Journal, 69(2):196-198, February 1976.

DRUG	Multi-Drug
SAMPLE SIZE	268
SAMPLE TYPE	Heads of Industry
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Virginia
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	2

PURPOSE

Drug abuse is becoming more widespread among the general population, and industries are increasingly recognizing their first incidences of drug abuse. In the spring of 1973, the Virginia Division of Drug Abuse Control surveyed over 600 of the state's largest industries to determine: (1) whether the industries had a problem with employees' alcohol or drug misuse; and (2) the prevailing climate concerning the employment of persons who either had undergone or may be undergoing treatment for substance abuse.

METHODOLOGY

A survey questionnaire was sent to 600 presidents or general managers of Virginia's largest industries. The survey obtained information on the industry's policy toward handling drug and alcohol problems, and toward the hiring and firing of current or former abusers. In addition, the industries were asked if they had any drug education programs and if they thought their industry had a serious drug abuse problem. A total of 268 surveys were returned for analysis purposes.

RESULTS

Seventy-seven percent of the industries had turned down a job applicant because of suspected or detected alcoholism. While industry in Virginia had experienced problems with suspected alcoholism, the majority (57%) had not turned down job applicants because of drug abuse. Eighty-seven percent of the industries felt a need to develop policies and procedures regarding alcoholism, while 50% of the firms did not feel a need to develop policies and procedures regarding drug misuse. Seventy-nine percent of the respondents had cause to dismiss an employee because of alcoholism, while 82% never had cause to do so because of drug misuse. Alcoholism was perceived as the most likely drug to be used by employees while at work (55%), followed by marihuana (33%), amphetamines (26%), barbiturates (23%), LSD (4%), and opiates (4%). Overall, presidents and/or managers saw alcoholism as industry's biggest drug abuse problem. Eighty-two percent of the companies stated they would retain an employee who was an alcoholic while he was undergoing treatment. This positive attitude was also reflected in the fact that 74% of the companies indicated that they would retain an employee who was a drug user while he underwent treatment. The most positive finding of the survey was that 95% of the companies stated that they would hire a person who had successfully completed a drug treatment program; another 47% said they would be interested, if major financial assistance were available, in training former drug abusers, with consideration given to eventual employment.

Based on their experience, 57% of the respondents believed that the issues surrounding drug misuse and abuse were not serious. Compared to other personnel problems, drug misuse and abuse was thought to be not serious by 66%. In regard to drug abuse problems, the perceived top three needs of industry included drug education, a need for a list of resource agencies that help troubled employees, and a need for assistance in forming guidelines for drug abuse policies.

CONCLUSIONS

The survey shows that a majority of industries have never had to dismiss an employee, or turn away a prospective employee, because of drug abuse. Industry's attitudes appear to be positive, and a willingness to cooperate with an employee's treatment appears to exist.

Criminal Behavior

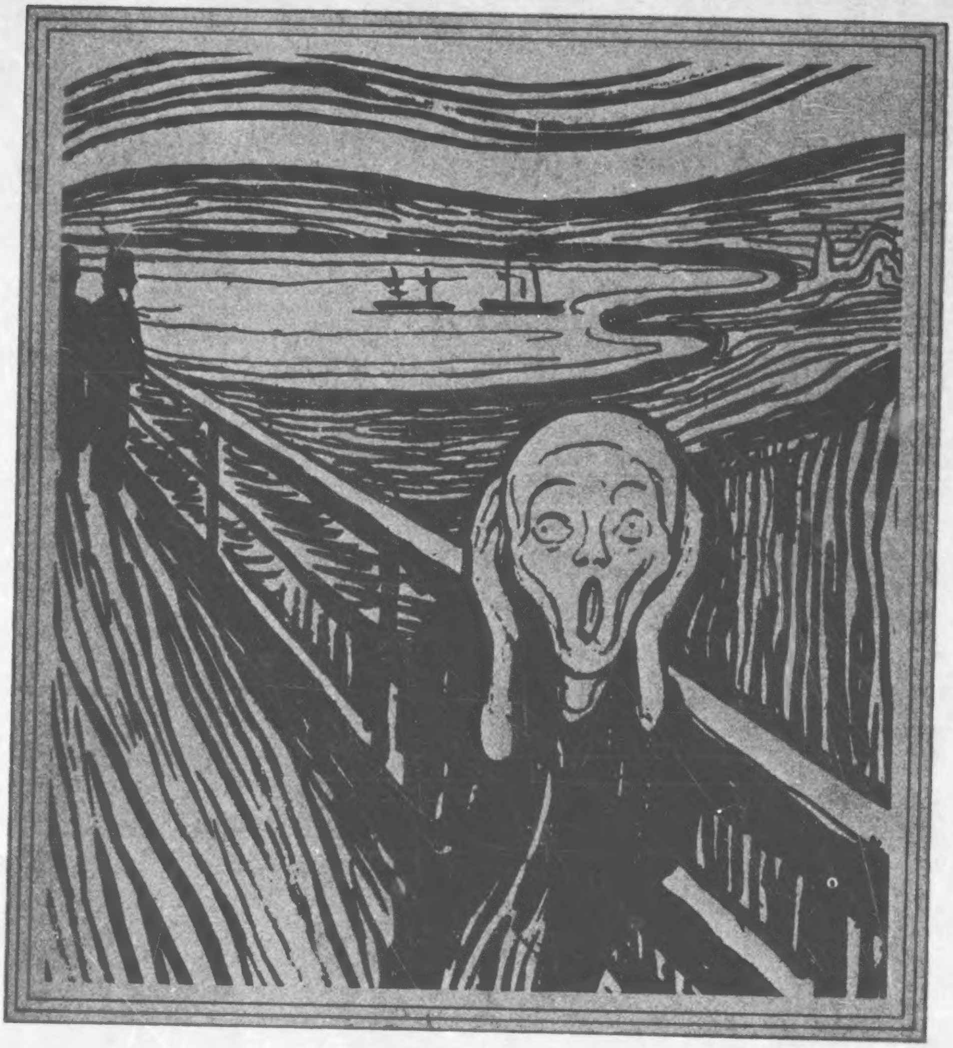


Illustration:

The Scream
Edvard Munch, 1895

Baridon, Philip C. Addiction, Crime, and Social Policy. Lexington, Mass.: D.C. Heath and Co., 1976. 126 pp.

DRUG	Opiates
SAMPLE SIZE	101
SAMPLE TYPE	Treatment
AGE	Adults (mean: 27)
SEX	70% Male; 30% Female
ETHNICITY	89% Black
GEOGRAPHICAL AREA	Washington, D.C.
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Police Records
DATE(S) CONDUCTED	1973 - 1974
NO. OF REFERENCES	Over 50

PURPOSE

Since the decision to criminalize nonmedical opiate use over 60 years ago, the relationship between addiction and the crime that is widely associated with it has become a major social issue. An exploratory study was conducted in order to analyze certain aspects of that relationship. Among the questions considered were (1) the economic impact of rising heroin prices on both the decision-making of the addict and the level of property offenses; and (2) the nature and extent of preaddictive criminal behavior, and the mechanism through which addiction intensifies this activity.

METHODOLOGY

The major source of data was interviews with 101 clients of the Narcotic Treatment Administration (NTA) in Washington, D.C., in late 1973 and early 1974. The mean age of the subjects was 27 years; most were male (70%) and black (89%). Initial use of opiates began on the average at age 19, and 56% reported "snorting" as the initial method of use. Seventy-nine percent of the sample were volunteers to the program and 21% were court referrals. In addition to the interviews, police records, crime statistics, and published literature were obtained.

RESULTS

Almost half of the respondents (48%) stated that their close friends were regularly engaged in a range of crime from relatively minor to quite serious. Forty-eight percent also believed that, following addiction, their friends intensified gainful crime. Although fewer nonaddicts were known by the subjects, a consistent pattern was found in which addicts committed offenses much more frequently than their nonaddicted counterparts. Approximately 30% of the subjects felt addicts stayed with one type of offense; most (63%) felt that the addict was purely an opportunist and would do anything to get drugs.

Respondents were asked about drug expenses at three different phases of their habit: (1) the initial period following experimentation and beginning with daily use; (2) one year after the initial period; and (3) the final year of street opiate use. Eighteen percent reported receiving either money or drugs or both from someone else during a substantial portion of their habit. Women accounted for nearly all of this subgroup. Among the other subjects, the most dramatic increase in expense occurred during the first year of daily use. Asked to state where they obtained money to buy drugs, dealing was most often mentioned (22.8%), followed by robbery (15.8%), burglary (8.9%), legitimate job (8.6%), "other" (7.9%), larceny (6.9%), forgery (3%), gambling (2%), and spouse-kin friends (1%). The category of "other" mostly consisted of prostitution, procuring, and short con. Dealing and prostitution were rarely indicated prior to addiction, while the opposite was true for robbery and larceny. There was a dramatic increase in serious crime between preaddiction and postaddiction periods. Before addiction, almost half of the sample had never committed a serious offense, while approximately 95% admitted committing at least one serious crime after addiction.

Most of the addicts (68.3%) found that the habit eventually became "too expensive." Of these, three-and-one-half times as many opted for a cure rather than "hustle" for more money. However, when the subjects were asked what "most" addicts do, two-and-one-half times as many suggested that additional "hustle" was the modal response. The majority (58.4%) believed that chronic heroin use significantly increased one's probability of arrest.

Crime in the Washington, D.C., area over a four-year period was related to the average national retail price of heroin to determine if an increase in drug prices might precipitate a corresponding increase in gainful crime. Surprisingly, the data indicated that the relationship between heroin and crime during this period was an inverse association. This relationship did not exist, however, on a micro level. Month-to-month fluctuation in the retail price of heroin did not correlate with the changes in reported property crime. The overall inverse relationship between crime and price of heroin may be due to large seizures of opiates which forced up prices, while crime declined as a result of greater law enforcement resources in a more stabilized population. Another factor could be the advent of methadone in Washington in a deteriorating heroin market. Almost all of the addicts interviewed reported that "the dope really began getting bad" in 1971. Methadone maintenance or detoxification through NTA became a logical option for many addicts--perhaps one-third of them. In addition to law enforcement and economic pressures against heroin use, heroin appeared to be less "acceptable" than it once was. It was inconsistent with the newly emerging black dignity and self-awareness. Peer pressure seemed to be more against than toward opiate use.

A somewhat related finding was that monetary cost was largely irrelevant in the addicts' decision whether a habit had grown unmanageable and whether treatment was personally indicated. Benefits seemed directly related to the quality of the drug, while costs were measured more in terms of sustained criminal involvement and social isolation than in terms of cash to finance the habit.

CONCLUSIONS

While intensification of earlier crime patterns is the usual means of adjustment to addiction, many previously uninvolved in criminal activity experience radical changes in their lifestyles by getting involved in crime. It is suggested that this situation of producing one type of deviance through attempts to control another should be remedied by a reexamination of social and legal priorities.

Boudouris, James. Criminality and addiction. International Journal of the Addictions, 11(6): 951-966, 1976.

DRUG	Methadone
SAMPLE SIZE	222
SAMPLE TYPE	Methadone Patients
AGE	Adults (mean 28)
SEX	Both Sexes
ETHNICITY	78% Black; 16% Puerto Rican; 6% White
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Interviews; Police Records
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	14

PURPOSE

A follow-up study of 112 dropouts and 110 active patients from one of the largest methadone maintenance programs in New York City was conducted in order to provide a comparison of criminality for various categories of addicts and ex-addicts.

METHODOLOGY

Follow-up of methadone program dropouts and active patients was accomplished by obtaining official arrest records from the New York Police Department and through interviews with the subjects. Among the dropouts, 74% were men and 20% were women (sic); of the active patients, 77% were men and 23% were women. Approximately 78% of all subjects were black, 16% were Puerto Rican, and 6% were white. The mean age of both samples was about 28 years, with a larger percentage of the dropouts being 30 years old or less (74% vs. 65%). Criminality was measured in two ways: (1) the proportion of the samples that were arrested 1 year prior to admission and 1 year after admission were compared to similar data that were available from other treatment programs; and (2) the average number of arrests and charges per person during a 12-month period both before and after admission was calculated. Rates were multiplied by 100 so that 100 signified an average of 1 arrest or charge per person per 12 months.

RESULTS

In comparing the subjects in this study with those in other studies, it appears that dropouts in general have slightly higher levels of criminal activity during the period prior to entering treatment. The amount that this criminal activity declines during the year after entering treatment varies according to the program, but in all programs criminality decreases among dropouts. This could be explained by two factors: (1) the year prior to entering treatment may be a year of particularly high criminal activity, and entry into treatment may be ordered by the courts as a condition for release from jail; and (2) a "dropout" may only be an "admission" to another program, and the new program will also contribute to a lower level of criminal activity.

In this study, 47% of the dropouts transferred to other methadone programs, 26% became drug-free, 16% were using heroin, and 11% were in institutions. Crime rates were highest for those dropouts who were in institutions at the time of interview, and those dropouts who were in methadone programs showed generally low crime rates. However, comparing rates for property crimes, the data indicated an increase during the year after admission for the methadone patients (almost doubling, from 49 to 98) and drug-free persons (from 43 to 68). It appeared that while the persons still using drugs had maintained their same lifestyles and level of criminal involvement in order to support their drug addiction, the methadone patients and drug-free persons had become more involved in property crime. When comparing men and women dropouts, the data indicated that men had higher rates than women in about 77% of the various arrest and charge categories. Persons referred to the program from the courts were compared with those admitted voluntarily or from other sources. During the "after" period, the highest levels of criminal activity were, surprisingly, found among the court cases who remained active in the program. Arrest rates for court-referred active cases increased from 143 to 186 (from before to after), while arrest rates for noncourt-referred cases decreased from 83 to 58.

CONCLUSIONS

Certain refinements in the categorization of "dropouts" and in the calculation of crime rates seem necessary if different drug treatment modalities are to be compared. The present data do not offer any easy generalizations regarding the treatment of addiction; the controversy surrounding methadone maintenance may be increased rather than resolved. The data suggest that methadone alone will not solve the crime problem and may even exacerbate it, at least for some groups of addicts.

California. Bureau of Criminal Statistics. Five-Year Follow-Up of 1966 Juvenile Burglary-Involved Drug Arrestees. Research Report No. 13. Sacramento, California: Bureau, 1973. 15 pp.

DRUG	Multi-Drug
SAMPLE SIZE	759
SAMPLE TYPE	Drug Offenders
AGE	Adolescents
SEX	714 Male; 45 Female
ETHNICITY	145 Black; 350 White; 255 Mexican-American; 9 Other
GEOGRAPHICAL AREA	California
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Police Records
DATE(S) CONDUCTED	1966 - 1971
NO. OF REFERENCES	0

PURPOSE

As part of a larger study of juvenile drug offenders who were arrested in 1966 on drug charges for the first time, five-year post-arrest criminal records were compiled for burglary-involved drug arrestees in order to follow the sequence of offenses in the subjects' criminal careers. Of prime interest was the relationship between drug and nondrug criminality.

METHODOLOGY

The original study groups consisted of 1,333 subjects with no prior record and 1,499 with previous arrests. The criminal records of the original survey were screened for subjects arrested for burglary during the five-year follow-up period. The burglary arrestees amounted to 334 in the no prior group (25%) and 425 (28%) in the prior record group. The subjects' criminal careers were traced through the fifth rearrest for both drug and nondrug offenses.

RESULTS

The prior record group contained a much larger proportion of Mexican-Americans and a smaller proportion of Negroes and whites than the no prior record sample. Only 33% of the Mexican-Americans had no prior record, compared to 50% of both whites and Negroes. With regard to initial drug offense for those with no prior record, the data indicated a relatively strong devotion to marihuana on the part of Negroes (82%) and a somewhat prominent incidence of dangerous drug violations by whites (28%). Among those with a prior record, the reverse appeared to be true: the Negro use of marihuana came very close to the sample average (74%), while the patronage of dangerous drugs had risen percentage-wise (22%). Among white subjects, marihuana use increased (73%) while that of dangerous drugs declined (19%).

Regarding first disposition, marihuana arrestees were somewhat more likely to be freed or to be accorded a mildly punitive disposition than were those involved with other drugs. For example, about 87% of those freed had been arrested initially on marihuana charges, as against 13% of those originally arrested for dangerous drug offenses.

Over the five-year period, the average number of drug rearrests averaged 2.27 for those subjects with no prior criminal record, compared to 3.01 for those with a prior record. Except for "other" drug offenses, marihuana law violations showed the highest extinction rate by the time of the fifth arrest--only about 1/20th of the original number of arrests related to this drug. Opiates showed the greatest persistence. Regarding nondrug rearrests, those subjects with no prior record averaged 5.04 rearrests while those subjects with a prior record averaged 5.35 rearrests. It appears, therefore, that the two types of offenses are not interconnected, but develop independently. It is very likely that drug use is an attribute of criminality rather than a cause.

Among those subjects with no prior record, the percentage of arrests for assault persisted over the five-year period (22.3%), while robbery was the persistent crime of rearrest among the prior record sample. Aside from robbery, property offenses accounted for about 36% of the no prior fifth arrests and 46% of the prior. The data indicated that the character of offenses shifted from crimes against persons to crimes against property. Burglary itself seemed to be only one aspect of a generalized display of deviant behavior. Over the five-year period, 55% of the no prior arrest group suffered incarceration or felony probation, compared to 69% of the prior group.

Edwards, Elizabeth D., and Goldner, Norman S. Criminality and addiction: Decline of client criminality in a methadone treatment program. Drug Forum, 4(3):251-259, 1975.

DRUG	Opiates
SAMPLE SIZE	100
SAMPLE TYPE	Methadone Patients
AGE	Adults; Aged (18-over 65)
SEX	74 Male; 26 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Not Specified
DATE(S) CONDUCTED	12/71 & 10/72
NO. OF REFERENCES	3

PURPOSE

In 1969, nearly 75% of all drug-related arrests in the state of Michigan occurred in Detroit and Wayne County. During 1969, the medical clinics operated in the inner city by the Detroit Mayor's Committee for Human Resources Development (MCHRD) were treating increasing numbers of heroin addicts. A request for OEO funds to establish a pilot heroin treatment program was granted in 1970 to provide supplementary social and rehabilitative services to methadone maintenance centers. A study was conducted to determine the extent to which participation in the MCHRD Drug Abuse Program (DAP) had resulted in decreased criminal behavior.

METHODOLOGY

Data were collected and analyzed for 75 subjects on age, sex, DAP entry date, total number of arrests and convictions before and after their entry into DAP, and the specific nature of the charges for which they were convicted before and after entry. The original sample of 100 clients, which was randomly selected to allow for sample depletion for various reasons, consisted of 26 females and 74 males from 18 years of age to 51 and over. Arrest and conviction statistics for each subject were calculated on the basis of length of participation in the program. A pilot study was completed in October 1971 (N=44), and the main study in October 1972 (N=75).

RESULTS

Both arrests (-24%) and convictions (-42%) decreased significantly. Convictions decreased considerably more than arrests for female clients (-72% change in convictions vs. -24% change in arrests). In the combined years of 1971-1972, the same pattern was evident (-75% vs. -39%).

Using the legal definition of crimes, there was a distinct reduction in criminal convictions for both males (-22% for misdemeanors, -80% for felonies) and females (-75%, and -50%, respectively). Overall felonies decreased -75%, and misdemeanors, -34%. The same pattern was evident when the combined 1971-1972 data were analyzed. Age groups 18-21 and 41-and-over showed greater decreases in all four categories of criminal activity: for arrests, convictions, misdemeanors, and felonies, those 18-21 showed -62%, -50%, -50%, and -100% reductions, respectively; for 41-and-over, -75%, -73%, -67%, and -100% respectively. Ages 22-30 showed +5% (increase), and -27%, -22%, and -50% reductions, respectively; and ages 31-40 showed -33%, -52%, -31%, and -100% reductions, respectively. The combined 1971-1972 samples showed less of a reduction in arrests, with the exception of the category 22-30, which was -19%.

CONCLUSIONS

Further research is necessary before a definitive statement can be made about the relationship between the success of drug programs in reducing client criminality and the observed decreases in metropolitan crime statistics. It is possible that other variables account for most of the reduction in crime statistics. However, drug programs do lead to reduced client criminality, and crime rates in communities with such programs have shown a steady decrease, as reflected by municipal and federal statistics.

Greenberg, Stephanie. The relationship between crime and amphetamine abuse: An empirical review of the literature. Contemporary Drug Problems, 5(2):101-130, 1976.

PURPOSE

The study of the relationship between crime and amphetamine abuse has a short history, and is filled with images suggesting drug-crazed, wild-eyed youth running rampant through the streets, violently attacking innocent people. As yet, there have been few systematic attempts to review and evaluate the evidence bearing upon the relationship between amphetamine abuse and crime to establish whether such conclusions are warranted. In order to help clarify this relationship, a literature review was undertaken.

SUMMARY

One of the major questions regarding the relationship between criminality and amphetamine abuse is whether criminal activity precedes abuse, or whether abuse causes criminality. The abuse of amphetamines first occurred after World War II, and the first observed cases were among a bohemian circle of artists and writers. However, in the 1950's both Swedish and Japanese observers found that abusers were primarily young lower-class males with substantial delinquent backgrounds. While there was an increase in crime concomitant with the increase in amphetamine use on an aggregate level, most individuals appeared to have been involved in criminal activity prior to the onset of abuse.

One of the earliest empirical studies was performed by Scott and Willcox (1965), who investigated the delinquent behavior of adolescents admitted to two London remand homes. They found that the amphetamine users in the homes had committed criminal acts prior to their use of the drug. Ellinwood (1967), comparing amphetamine abusers (30 mg or more on a daily basis) with a general population of drug abusers in a public health hospital, found that predrug juvenile delinquency was higher in the amphetamine sample than in the general sample. Robins and Murphy (1967) utilized a methodology which was as close as possible to being prospective. They studied a sample of black males who were born in St. Louis between 1930 and 1934, and attended St. Louis public schools for six or more years. In this sample, delinquency doubled the likelihood of subsequent amphetamine abuse. Using participant-observer techniques, Blumer (1967) studied lower-class adolescent drug users in Oakland, California. He discovered two major types: the "rowdy dude" and the "cool" drug user. The rowdy user used a wide variety of drugs--predominantly alcohol, but also amphetamines when available. In addition to polydrug use, this user would readily engage in aggressive, "wild" behavior, and would most likely run into trouble with police as an adult. The "cool" user used a variety of drugs, including amphetamines, but marihuana was the most prevalent; violence and most forms of criminal behavior were devalued by the "cool" user as being not worth the trouble they created. In contrast to the previously cited studies, Smith (1969) found that in the Haight-Ashbury, users of amphetamine were white, of the upper-middle class, college-educated, and, most important, had no criminal involvement prior to first use of drugs. Criminality was shown to follow the onset of amphetamine use.

One strategy used in dealing with the issue of crime and addiction is to compare crime rates with abuse rates. Two studies in Japan (Masaki, 1956; Nagahama, 1968) and one in Sweden (Inghe, 1969) found that concurrent with a sharp increase in amphetamine use, there was an increase in the crime rate. But this type of research has a number of serious problems. For example, the fact that two events occur during the same period of time is not evidence that they are causally related. Other researchers have studied the incidence of amphetamine abuse among criminals. In three British studies (Scott and Willcox, 1965; Cockett and Marks, 1969; Lancaster and Rockley, 1970), only a small proportion of the subjects were found to show positive urine analyses for amphetamine or methamphetamine.

While these studies suggest that amphetamine use is not particularly concentrated among criminals, there is the question of whether the crimes committed by amphetamine abusers differ from those committed by other criminals. Of the eight studies addressing the question, seven found no difference in types of crimes committed. Only one study (Tupin et al., 1973) reported the concentration of amphetamine use among violent criminals. In one of the most comprehensive and well-designed investigations in the literature (Eckerman et al., 1971), a sample of 1,889 arrestees were studied through the means of urinalysis, interviews, and the checking of drug registers. Approximately half of the total sample were drug abusers. Robbery emerged as the major crime committed by all types of drug abusers. While amphetamine users comprised less than 10% of the sample of drug users, robbery occurred slightly more frequently in the amphetamine group. Forcible rape and criminal homicide occurred somewhat more frequently among amphetamine users than other drug users, but less frequently than among nondrug users. The major crime of amphetamine abusers, accounting for almost one-fourth of the respondents, was burglary.

Regarding amphetamine use and violence, two researchers have found that while the drug may increase the potential for violence, its actual occurrence is very much a product of the structure of the immediate situation. Both Ellinwood (1971) and Kramer et al. (1967) conclude that violence by amphetamine users may be muted if used in a group context. The group usually expects the effects of the drug, so that the sudden energy and paranoia that often result are viewed as natural consequences of amphetamine use. Ellinwood also posits that amphetamine may have opposite effects on individuals according to dosage level, length of usage, and personality characteristics.

There are several methodological problems in amphetamine abuse research. Regarding the temporal sequence of amphetamine use and crime, the majority of studies use either official arrest statistics or self-reports. While self-reports have been shown to have high validity, arrest data appear to be more problematic. The most general weakness of the current research is the overall lack of sophistication. In most cases, the sampling procedure is not systematic enough to make inferences beyond the immediate sample possible. Further, there is almost never any attempt to control for confounding variables. The analyses rarely go beyond the level of describing bivariate relationships--comparing, for example, criminal records of drug users and nondrug users or the drug-using behavior of offenders and nonoffenders. It is rare that such basic demographic variables as age, sex, and race are controlled. This may be a function of the fact that very little of the existing research appears to have been motivated by theoretical considerations.

CONCLUSIONS

There appear to be two major populations of amphetamine abusers who become involved in criminal activity. One is a group having substantial criminal histories prior to the first use of amphetamine. The second is comprised of white, middle-class youths whose use of the drug is exploratory in nature. It also appears that amphetamine use is not highly concentrated among criminal groups, and that crimes committed by amphetamine users do not differ significantly from crimes committed by users of other drugs. Lastly, the evidence indicates that the use of amphetamine *per se* is not particularly conducive to violence.

Grupp, Stanley E., and Bridges, Charles K. Criminal record characteristics of California and Illinois adult marihuana arrestees, Australian and New Zealand Journal of Criminology, 8(1):25-35, March 1975.

DRUG	Cannabis
SAMPLE SIZE	661
SAMPLE TYPE	Marihuana Arrestees
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	California; Illinois
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Police Records
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	0

PURPOSE

A previous paper (Grupp and Bridges, 1973) detailed the character of the prior criminal record of two samples of adult marihuana arrestees from California, and examined the shifts in this record over a decade. With this and earlier work (Grupp, 1973) as a point of departure, the present study involved the selection of available data regarding the criminal character of a sample of adult marihuana arrestees from Illinois; then, records for samples from Illinois and California were compared to assess the extent to which they differed.

METHODOLOGY

Illinois information was obtained through careful search of the case files of the narcotics division of the Illinois Bureau of Investigation at Springfield. The specific procedures first involved an examination of two statewide casebooks (1958-1964, and 1969). Although initially 1960 and 1969 Illinois data were to be used, too few subjects were eligible for analysis for 1960. For the year 1969, 272 adults who had been arrested on a marihuana-related charge were identified. The 1969 sample of 389 for California was drawn from individual superior court prosecution records submitted to the California Bureau of Criminal Statistics by county district attorneys. Rap sheets--formal criminal history records maintained by law enforcement agencies--served as a source of information on prior criminal record.

RESULTS

General characteristics for Illinois showed that 125 (46%) of the subjects had some kind of prior criminal record, and that subjects arrested by the Chicago office of the Illinois Bureau of Investigation were more likely to have a criminal record than those arrested in the Springfield office (58% and 38%, respectively, had a criminal record). A comparison of the arrests at the two offices with respect to the seriousness of the prior criminal record indicated a statistically significant difference (p<.05), with Chicago deporting more serious prior records. Sixty-two (23%) subjects had a prior drug record (Chicago, 35%; Springfield, 15%; p<.05). Neither the data regarding the overall pattern of the seriousness of the prior criminal record, nor prior drug record as measured by the rap sheets, suggested that the 1969 adult marihuana arrest clientele of the Illinois Bureau of Investigation were a criminal threat.

Comparing California and Illinois subjects in terms of the broadest categories (seriousness of prior criminal record, seriousness of prior drug record, total number of arrests and total number of convictions), differences were statistically significant in each of these areas. Illinois subjects were more apt than California subjects to have a "minor" prior criminal record (p<.001); when a prior drug record did exist, the record of Illinois subjects was less serious (p<.001); Illinois subjects fell into the lowest arrest category (p<.01); and California subjects had more previous convictions (p<.001).

Comparative prior arrest data reporting the number of arrests for four crime categories showed that only the category of arrests for miscellaneous crimes was statistically significant: Illinois subjects had fewer miscellaneous arrests than California subjects (p<.001). In all instances, the absence of a previous arrest record was more apt to occur in Illinois than in California.

Analysis and inspection of the various percentages indicated that, as measured by conviction data, the Illinois sample were less involved criminally than the California sample. Differences were statistically significant for each of the crime-specific prior-conviction categories: crimes against person (p<.05), property crimes (p<.01), drug-related crimes (p<.001), and miscellaneous crimes (p<.001). Not only were California subjects more apt than the Illinois sample to have a previous conviction, but the range from the lowest to the highest proportion of subjects with a previous conviction was much greater in California than in Illinois.

Hayim, Gila J. "Changes in the Criminal Behavior of Heroin Addicts: A Two-Year Follow-up of Methadone Treatment." The Center for Criminal Justice, Harvard Law School, and the Addiction Research and Treatment Corporation Evaluation Team, Columbia University School of Social Work, July 1973. 75 pp.

DRUG	Methadone
SAMPLE SIZE	357
SAMPLE TYPE	Methadone Patients
AGE	Adults (mean 33.8)
SEX	82% Male; 18% Female
ETHNICITY	87% Black
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Interviews, Police Records; Court Records
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	27

PURPOSE

Despite the rapid expansion of methadone programs and the tremendous amount of evaluative literature emphasizing their impact on the reduction of crime, maintenance on methadone still remains a controversial issue. Through examination of official and self-reported data, the specific gains in crime reduction achieved by specific addicts in the Addiction Research and Treatment Corporation (ARTC) were assessed.

METHODOLOGY

A two-year follow-up was made of the criminal behavior of 357 patients who comprised the first consecutive admissions to ARTC, a methadone maintenance program. The second-year cohort comprised 90% of the patients studied in the previous one-year follow-up. The average age of the patients upon admission was 33.8. The majority of the patients were black (87%) and male (82%). The average age for the onset of addiction was 21 years. The average number of years of schooling completed was 10.6; the majority were unemployed during the preadmission year, and of those employed, only 47% worked for a period of six months or more. The pre-program criminal characteristics of the patients indicated that as many as 93% were arrested, from age 16 up to entry into the program, and approximately three-quarters had a jail experience exceeding one month.

Analysis was based on official police and court records and was supplemented, where possible, by data obtained from interviews with the patients. Police records were updated on the second anniversary of patients' date of admission. The administration of methadone to these patients was one aspect of a broader multimodality environment, which included educational, counseling, legal, and medical aid and job placement. A dropout was defined as a patient absent from the program for a full calendar month.

RESULTS

While the overall charge rate in the first year of treatment dropped only modestly relative to the preadmission year, the decline in the second year of treatment dropped from 1.20 charges per person to .74, or 40%. The rate of decline in arrest rate amounted to a 44% decrease: from 52% of patients arrested one year before entry to 29% of patients arrested two years after admission. The decline was greatest in drug and prostitution offenses (58% and 78%, respectively), and property offenses (33%). Crimes of violence including robbery increased considerably (for assault, from .04 per person on first year before entry, to .09 on second year after entry; and for robbery, from .01 to .03, respectively). However, the addicts' preadmission rates of crimes of violence were low compared to other types of crime and were the least likely types of crime to be committed by these patients.

Aggregate results were specified by comparing patients in a sample subgrouped by a number of variables that were of importance in differentiating the results. Age at entry, length of stay in the program, prior criminal records, degrees of heroin abuse while in treatment, and sex were among the factors thought to identify the type of patients who benefited most by the program. A one-year period seemed to be needed by the responsive patient to make the transition to his new role, to begin to relate comfortably to the treatment environment, and to become familiar with the benefits offered by the program. For the active patients, the overall crime rate declined by 50% from the rate which characterized their preadmission year. By contrast, the overall crime rate of the patients who dropped out of the program before completing one year of treatment decreased by only 25%. In respect to different types of crime, the active patients (the two-year retainees) substantially reduced their criminal charges related to the purchase, possession, and sale of drugs as well as those related to burglary, larceny, shoplifting, and other theft. The charge rate for drug offenses, for instance, declined by 68%; property offenses declined by 67%. The charge rates for prostitution, gambling, forging checks or prescriptions dropped nearly to zero during the second year in the program. The charge rate for assault increased for both the active and the terminated groups. Among early dropouts from the program, the proportion of those who entered the program between the ages of 21 and 30 was higher than among older patients. Of the two-year retainees in the program, 47% were admitted between the ages of 21 and 34, and the majority were in their 20's.

Patients who either abstained from heroin, or used it infrequently, displayed reduced post-treatment criminal charge rates, and a steady trend in crime reduction over time. A comparison of charge rates for the first year before entry with those for the second year indicated that low abusers in the second-year cohort showed an 80% reduction in the rate of drug offenses, compared to a 21% reduction for the same offense for the high-abuse groups, and a 76% reduction in property offenses compared to a 20% reduction for the high-abuse group. The overall crime rate showed a decline of 57% for the low abusers compared to a 9% decline for the high abusers. Data analyzing the criminal behavior of 28 patients between 21 and 30 years of age at time of admission, who remained in the program for two full years and who abstained from heroin or used it only infrequently, showed that their drug offense rate sharply declined from .54 in the pre-admission year to .04 during the second year in treatment, and that their property offense rate correspondingly declined from .43 to .07 for the same period. These rates were compared with those computed for 20 patients of the same age category and the same length of stay in the program who were categorized as high heroin abusers. The latter group also showed a reduction in both their drug and property charges, but at a rate lower than that achieved by the low-abuse patients.

CONCLUSIONS

The influence of the patients' preprogram social experience can only partially explain their performance while in treatment. The interaction of this preprogram legacy with the processes acting on these individuals in the treatment environment itself may have greater impact on the outcome. Changes in legal and community attitudes, job opportunities, the structuring of leisure time, and familial and general social interaction are factors that can reinforce or obstruct the effects of methadone treatment; this is in addition to the impact of the patient's immediate networks of community associations, whose effects on relapse or, conversely, rehabilitation have been well documented in the literature.

James, Jennifer. Prostitution and addiction: An interdisciplinary approach. Addictive Diseases, 2(4):601-618, 1976.

DRUG	Opiates
SAMPLE SIZE	100
SAMPLE TYPE	Addicts; Prostitutes
AGE	Not Specified
SEX	Female
ETHNICITY	Black; White
GEOGRAPHICAL AREA	West Coast
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Questionnaires; Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	28

PURPOSE

The involvement of women in criminal activity has been increasing rapidly over the last decade. Two areas of concern and research have been addiction and prostitution; a connection between the two has frequently been made, but the dynamics of the relationship have not been carefully examined. Added to the limited amount of research on prostitution and addiction have been the stereotypes applied to women's sexuality and the double standard of expected sexual behavior. Women who were either prostitutes or addicts, or addict prostitutes, were interviewed to provide an initial statement of a framework for understanding the interrelationships of these populations, and to provide data for reliable recommendations for social and legal change.

METHODOLOGY

A sample of 100 addicts, prostitutes, and addict prostitutes were included for study. The subjects were interviewed in depth, extended questionaires were administered, field work was conducted in homes and jail, and the MMPI was given. The women all resided in a West Coast city.

RESULTS

The data indicated a definite interaction between onset of addiction and entrance into prostitution. An almost equal number reported addiction before (N=24) and after (N=19) prostitution. The time span in months for the two equations, prostitution=addiction and addiction=prostitution, averaged out to a longer time span between prostitution and onset of addiction than between onset of addiction and subsequent prostitution. The age mean for the entire sample was younger for addiction than for involvement in prostitution. Younger women appeared to have gotten involved in drug abuse first, and may have turned to prostitution as a support system. Analysis of race showed a slight differentiation between use of narcotic drugs and entrance into prostitution. Black women were more likely than white to have been addicted prior to prostitution (47% versus 41%). White subjects were more likely to report drug-use increase as a result of emotional stress and social environment, while black women cited the increase in ability to work as the most significant factor.

Among the three groups, it was found that the prostitutes clearly separated themselves from addiction, and the addicts made the same separation from prostitution. The individual who combined both did so primarily because of the need for money to support drug use and secondarily as a result of the increased availability of money and drugs after entering prostitution. The prostitute, in contrast, was faced with the ethics of the "fast life" as a barrier to addiction. A woman really committed to the lifestyle of the professional prostitute would be less likely to become an addict. On the MMPI variables, high scores were suggestive of lower social competence and low scores of greater social competence. In general, where group mean scores differed (F, Hs, D, Hy, Mf, Pt, Sc, and Si), the addict-prostitute and addict groups appeared to have less social competence than the prostitute group, which had a greater degree of social competence.

CONCLUSIONS

The choice of addiction can be viewed as a potential step toward prostitution because of the latter's viability as a support system. The choice of prostitution can also be viewed as a potential step toward addiction because of emotional pressure and the proximity to narcotics. Despite the interaction between addiction and prostitution, there are many women who choose to be either addicts or prostitutes and have no intention of combining the two. These women must be viewed in the context of the sex-role expectations in American society that affect their identity whether they are prostitutes, or addicts, or both. The significant connection between addiction and prostitution makes it clear that changes in prostitution laws cannot realistically be made in isolation from changes in narcotics laws unless the addict-prostitute is recognized as an offender separate from the prostitute. Prostitutes would be more likely to accede to regulations; for the addict-prostitute, it would be difficult, if not impossible.

Long, Gary L., and Demaree, R.G. Indicators on criminality during treatment for drug abuse. *American Journal of Drug and Alcohol Abuse*, 2(1):123-136, 1975.

DRUG	Opiates
SAMPLE SIZE	3,483
SAMPLE TYPE	Treatment (outpatient)
AGE	Cross-Age
SEX	Male
ETHNICITY	1,776 Black; 741 White; 666 Puerto Rican; 244 Mexican-American; 56 Other
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics
DATE(S) CONDUCTED	June 1, 1971 - May 31, 1972
NO. OF REFERENCES	9

PURPOSE

Many studies have pointed to a sharp reduction in criminal activities upon a subject's entry into drug treatment programs, as well as a generally low ebb of criminal behavior during treatment. Several indicators of criminality were examined in a sample of outpatients who were followed for the first six to twelve months in methadone maintenance or drug-free treatment programs at 31 different agencies participating in the Drug Abuse Reporting Program (DARP).

METHODOLOGY

Data on each of 3,483 outpatients admitted during a one-year period starting June 1, 1971, were collected on a bimonthly basis. The admission record for each patient contained information on prior criminality, legal status at admission, and an indication as to whether the individual had an illegal means of support during the two-month period preceding entry into treatment. The bimonthly status provided information on arrests, days in jail, and whether the patient had an illegal source of support. Males made up three-fourths of the sample; about one-third were 21-25 years of age; blacks accounted for about half the sample, whites and Puerto Ricans for approximately 20% each, and Mexican-Americans for 7%; about nine out of ten were in methadone maintenance programs, while the remaining tenth received drug-free outpatient treatment.

The three criminality indicators over the first six periods in treatment were expressed as percentages of patients in each period with (1) illegal support, (2) one or more arrests, and (3) one or more days in jail. About one-third of the patients had a legal status such as probation (13.2%) or parole (5%), or some legal action pending. In the total sample, 23.4% had no prior arrests, 16.3% had been arrrested only once, and 11.4% had been arrested more tnan ten times.

RESULTS

There was a fairly strong tendency in the direction of illegal support, as shown by correlations of 0.59 between the first and second periods, 0.57 between the second and third, and 0.33 between the first and third. The other two variables, based on arrests and days in jail, showed only a slight carry-over from one time period to another: 0.51, 0.58, and 0.66 within the three periods, in order. The percentage of patients arrested one time or more during each of the first three two-month periods was approximately 1.6% for crimes of profit, 0.9% for drug violations, and 0.4% for crimes against persons. Two hundred and thirty-four, or 6.7% of the patients, were arrested one time or more during the first six months of treatment. Only 41 of these were arrested during more than one of the three two-month periods in the first six months; 27 were arrested once during two of the three periods, and two were arrested once during each of the three periods.

Mexican-Americans had the highest prevalence on the three indicators during all six periods in treatment (highs were: illegal support, 11.1%; arrested, 5.8%; and time in jail, 8.7%). The Puerto Rican group had the lowest prevalence per two-month period of arrests and time in jail over the six periods covering the first year in treatment (1.5% and 1.6%, respectively), while the percentage for illegal support was higher (2.4%). Blacks, whites, and Puerto Ricans did not differ consistently on this indicator. For arrests, blacks and whites were on a par; and in all six periods, blacks had a higher prevalence of time in jail than did whites.

Over the first year in treatment there was no apparent difference between males and females in the prevalence of illegal support. The prevalence of arrests among females declined from 3.2% in the first two months to 1.6% in the last two months of the first year in treatment. For males, the prevalence of arrests ranged from 2.4% to 3.2% per period. The prevalence of time in jail was lower for females than for males in all six periods, but was particularly low for the last two periods of the first year in treatment (males, 4.5% and 3.7%; females, 1.7% and 1.3%).

There was a higher prevalence in the 23- to 25-year-old group than in any other age group on all three indicators. This was evident in regard to the prevalence of illegal support (high of 7.5%). With respect to arrests, this group had the highest prevalence of arrests during the first four periods (high of 4.8%), and next-to-highest during the last two periods (high of 3.1%) of the first year in treatment. The next-to-lowest arrest rate was taken in four of the six periods by the patients over 40 years of age (low of 0.8%). Over the first three periods, the 23-25 group had the highest percentage of patients with one or more days in jail (high of 5.6%). The under-eighteen group had the lowest prevalence of time in jail for all periods except the first (low of 0.7%). Again, the over-forty group in all six periods had a relatively low percentage of patients in jail for one day or more (low of 1.6%).

In a sample of 2,824 methadone maintenance patients drawn from the sample, a series of studies (Demaree et al., 1974) was made of the relationships between differential outcomes over time in treatment and patient characteristics, pretreatment variables, and in-treatment measures. It was found that an illegal source of support during the two-month pretreatment period was indicative of adverse outcomes for employment, alcohol consumption, and drug use during the first year in treatment. Criminality indications during treatment were associated with lack of gainful employment or engagement as a student or housewife, and use of drugs during the first year of treatment. The prevalence of illegal support during terminal periods in treatment was considerably higher than the prevalence in the same period for patients who were continued in treatment (12.4% at two months in treatment; 11.8% at three months in treatment; 10.2% at four months in treatment; and 6.9% at five months in treatment).

CONCLUSIONS

Illegal means of support, arrests, and time in jail as indicators of criminality during treatment for drug abuse reveal no trends over the first year in treatment. Greater evidence of criminality is found, however, for males, Mexican-Americans, and patients 23-25 years old than for other groups.

Shellow, Robert. Drug abuse and crime: Fact or fancy? Contemporary Drug Problems, 5(2):131-147, 1976.

PURPOSE

Effective drug policy is dependent upon research. From the point of view of social management, research serves two distinct and important functions: to develop knowledge in order to form policy decisions, and to evaluate policy alternatives both before and after those decisions have been made. Accordingly, in October 1977, the National Institute on Drug Abuse Panel on Drug Use and Criminal Behavior attempted to review current knowledge of the relationship between drug use and criminality, ascertain what further knowledge is required to effect useful policy decisions, and identify the sources from which this knowledge might be gained.

SUMMARY

The relationship between drug use and criminality can only be approached through the limited information and methodologically weak research currently available. Drug policy has been based upon the following assumptions: that curtailed supply and rising habit costs drive users to treatment or alternative drugs, and discourage marginal users; and that available treatment attracts those who find it difficult to maintain an expensive habit, removing users from the marketplace. Thus curtailment of supply simultaneous with availability of treatment is assumed to produce desirable results.

There are essentially three major drug/crime issues: causality and effects, treatment, and consumer behavior. Drug abuse is statistically associated with crime but available research and data have not convincingly shown a causal relationship to exist between the two. Many estimates concerning the number of addicts and users involved in crime stem from arrest dockets and counts of those jailed. If serious consideration is given to the hypothesis that addicts may be over-represented in the jails and arrest dockets because their addiction or use makes them more visible or less criminally competent, the estimates provided by the criminal justice system cannot be accepted.

Similar problems arise in attempting to ascertain the effect of treatment on the criminal behavior of users and addicts. The experience of those in treatment may not reflect that of the entire population. While some research has been done, key issues have not been addressed. Of specific interest are the questions of how changes in drug use patterns are related to changes in criminality patterns, what the episodic relationship between drug use and crime is, and how peripheral factors such as unemployment and law enforcement emphasis can effect the situation.

Treatment programs are responsible for impeding an accelerating rate of criminality. Current research supports the short-term value of these programs. Long-term studies, however, indicate that the recidivism rate gradually returns to pretreatment levels. While it is noted that heroin addiction intensifies criminal behavior, a permanent drop in criminality through treatment may not be possible.

With reference to the market issue, it is clear that dramatic or exorbitant rises in price discourage consumption. Gradual increases, however, like most inflation, are little noticed.

CONCLUSIONS

Three fields are in need of careful attention, and the following suggestions are offered: (1) expanded knowledge of the association between drug use and crime is vital. Research should supply more knowledge of drug-related criminal behavior of untreated users and of drug use of undetected criminals. Better data on types and amounts of crimes committed during episodes of drug use is necessary and more sophisticated analytic techniques of assessing drug abuse in relation to other factors should be encouraged. (2) More longitudinal studies of treatment outcome are needed to determine impact of drug treatment on criminality, as well as an assessment of the extent to which criminality would have occurred without treatment. (3) Finally, a comparative study of drug consumer behavior among street addicts, arrestees and treatment patients to determine market behavior patterns is recommended.

Silverman, Lester P., and Spriull, Nancy L. Urban crime and the price of heroin. Journal of Urban Economics, 4:80-103, 1977.

PURPOSE

It is apparent that there is a relationship between use of heroin and criminal activity. Because it is believed that much crime is committed to finance heroin consumption, society has attempted to reduce both the use of drugs and the creation of new addicts by suppressing drug traffic. An investigation was undertaken to estimate the effects of changes in the availability of heroin (as measured by its retail price) on crimes committed to support consumption of this narcotic. A time-series model was estimated, relating the number of offenses reported to the Detroit Police Department from November 1970 to July 1974, to such independent variables as heroin availability, temperature, season, time trend, and law enforcement activity. This model reflected addict behavior by including as a parameter the price elasticity of heroin consumption. Measures of monthly crime were established by type of offense and by location within the city of Detroit. The city was divided into three regions: poor nonwhite, rich white, and "all others." It was hypothesized that total property crime in the poor nonwhite community would be more sensitive to the price of heroin than in the rich white area.

SUMMARY

The overall trend in property crimes in the poor nonwhite community had been significantly downward for the period 1970-1973, while no discernible trend existed for personal crimes. Warm weather had a substantial effect on both categories of crime. Approximately 35% more property crimes and 43% more personal crimes were committed in July than in January. Using the estimation model, it was determined that a 10% increase in the price of heroin resulted in a 2.7% decrease in average monthly consumption. The net effect on crime was a 3.1% increase in total property crime in the poor nonwhite community.

The explanatory power of the model for total property and total personal crime in the rich white community was somewhat lower than in the poor nonwhite tracts, but still substantial. As in the poor nonwhite tracts, there was a falling trend in property crimes. A rising trend in personal crimes was also found. Warm weather had an even greater effect on both categories of crimes in this community. The effect of a price increase in heroin on property crime was about half as large in the rich white tracts as in the poor nonwhite tracts, thus confirming the study's hypothesis. Throughout the city, expenditure on heroin was a marginally significant factor in personal crime.

Regarding specific crimes, the effect of an increase in heroin price was felt by poor nonwhite residents in all categories of property crimes (a total increase of 15%), except auto theft. The largest effect was in burglary (41% increase), especially nonresidential, with robbery (25% increase) following. Rich white communities had a net increase in property crime of 80%. Armed robbery (42% increase) in the rich white community was the major effect of changes in the expenditure of heroin. The availability of heroin had virtually no effect on the incidence of personal crime in the poor nonwhite community. In the rich white tracts, however, simple assaults appeared to be related to the availability of the drug. It could be that some aborted robberies resulted in assaults.

The elasticity of heroin consumption as a function of potency and relative price was inferred from the relationship explaining total property crime in poor nonwhite neighborhoods. At potency levels from 2.5% to 10%, the long-run price elasticity of the average habit was approximately -0.25; a 10% increase in the price of heroin resulted in a 2.5% decrease in average monthly consumption. This estimate placed heroin in the class of many moderately inelastic consumer goods. In contrast, the short-run price elasticities were quite sensitive to the price relative to the recent past. Thus, addicts adjusted their consumption more in the short run than in the long run.

CONCLUSIONS

This study has shown that the level of property crime in Detroit is in part affected by the price of heroin. When the price rises, crime rises. Criminal heroin users as a class try to maintain their level of consumption in the face of price increases, and they rely partly on property crime for the additional funds. The level of personal crime is little affected by the price of heroin. It is not suggested that all those who commit crime to finance their consumption of heroin will increase the amount of crime they commit when the price of heroin rises; they may simply adjust their habit to fit their available funds. In the aggregate, it was estimated that a 50% increase in price would result in a 13% decrease (after several months) in the quantity of heroin consumed. This heroin price elasticity (approximately -0.27) provides evidence that addicts do adjust their habits.

Not all residents suffer equally from increased crime due to fluctuation in heroin prices. Poor people appear to be victimized most; thus, law enforcement policies that tend to raise the price of heroin hurt this income class.

Stephens, Richard, and Ellis, Rosalind D. Narcotic addicts and crime. Criminology, 12(4):4): 474-488, February 1975.

DRUG	Not Specified
SAMPLE SIZE	589
SAMPLE TYPE	Treatment (inpatient)
AGE	Adults (24-25)
SEX	Male
ETHNICITY	47% Black; 27% Puerto Rican; 26% White
GEOGRAPHICAL AREA	New York
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Police Records
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	11

PURPOSE

The idea that addicts are basically nonviolent has been questioned. Kozel et al. (1972) found that addicts did not differ significantly from a sample of nonaddict offenders in the total percentage of "crimes against persons" committed by each group. In this study, three questions were explored: (1) Has the nature of crimes committed by addicts changed over time? (2) Has the nature of crimes committed by a sample of addicts changed over the period of time since they became addicts? and (3) What is the temporal relationship between crime and addiction?

METHODOLOGY

The sample was comprised of four cohorts of male addicts, aged 24-25, who were criminally certified to the New York State Narcotic Addiction Control Commission (NACC). The cohorts were admitted between April 1 and March 31, 1969 (N=82), 1970 (N=104), 1971 (N=300), and 1972 (N=103). The total sample was 47% black, 26% white, and 27% Puerto Rican. The subjects had abused drugs a median of 7.2 years and had been arrested, on the average, at least once. Arrests were used as the basis for analysis, each one coded according to the breakdown of its component charges: (1) arrests for crimes against the person; (2) arrests for crimes against property; (3) arrests for drug offenses; and (4) arrests for other crimes.

RESULTS

In terms of the rank order of the relative contribution of each type of arrest to the total, drug arrests were ranked first (for all cohorts, 40% or over), followed by property (for all cohorts, under 40%), person (for all cohorts, between 15% to 20%), and other arrests (for all cohorts, under 10%). The percentage of addicts arrested for each type of crime in the year prior to their admission to NACC showed a steady increase of addicts arrested for person crimes (from about 20% to almost 40%), and a decline of addicts arrested for drug crimes (from 60% to about 55%). There was a slight decline in those arrested for property offenses (from about 48% to about 40%), while other arrests held steady (under 10%). For each cohort, 85% or more of all the arrests for crimes against the person occurred in combination with a property offense.

For 217 individuals in the 1971 cohort whose arrest history was coded for a five-year period, drug arrests showed a steady increase (from about 30% to about 50%), while property arrests showed a steady decline (from about 50% to about 30%). Person and other arrests remained stable (about 18% and about 10%, respectively). For every one of the five years, property and drug arrests, combined, accounted for at least 75% of all arrests. Except for the category of other arrests, there was an increase for the five-year period for the remaining three types of arrest. The numbers of people arrested for drug, property, and person offenses all rose (from about 15% to 60%; from about 20% to 40%; and from about 10% to 20%, respectively), with the greatest increases found for drug and property offenses.

Concerning whether any association could be drawn between drug use and criminality, it was found that as length of drug abuse increased, the likelihood of being arrested before drug abuse decreased; and the converse held true. Generally, for each type of arrest, more persons were arrested after than before drug abuse. One-fifth of the cohort had been arrested for property offenses before drug abuse; however, there was a threefold increase in the number arrested after drug abuse. Thirty-seven percent of the cohort had been arrested before they began to abuse drugs; thus, drug abuse cannot be said to have caused criminal activity for 37% of the cohort.

CONCLUSIONS

The data seem to demonstrate that most addict crime is either directly linked to addiction (e.g., drug arrests) or is economically motivated. However, there seems to be an increase in the use of person crimes to obtain money. Why addicts are willing to turn to violence to achieve this end is an intriguing question which needs to be explored further.

Weissman, James C.; and File, Karen N. Criminal behavior patterns of female addicts: A comparison of findings in two cities. International Journal of the Addictions, 11(6):1063-1077, 1976.

DRUG	Opiates
SAMPLE SIZE	380
SAMPLE TYPE	Addicted Female Arrestees
AGE	Adults
SEX	Female
ETHNICITY	Black; White; Hispanic
GEOGRAPHICAL AREA	Denver, Colorado Philadelphia, Pennsylvania
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Police Records; Laboratory/Examination
DATE(S) CONDUCTED	1973 - 1974
NO. OF REFERENCES	10

PURPOSE

A great deal of literature exists on the relation between drug use and crime among males. The few studies which have dealt with female addict crime have generally concluded that females either become prostitutes or commit crimes against property. In this study, the either/or hypothesis was tested using data obtained on female addict arrestees in Philadelphia and Denver.

METHODOLOGY

File et al. (1974) examined the arrest patterns of 227 consecutive narcotics-addicted female arrestees in Philadelphia. The results of that study showed that, contrary to expectation, female addicts were not simply prostitutes or engaged in other criminal behaviors. Rather, they exhibited four distinct criminal behavior patterns: prostitutes/criminals (prostitutes who commit serious crimes); prostitutes (prostitutes without a history of serious crime); criminals (females with a history of serious crime who are not prostitutes); and bag followers (females who are not prostitutes and commit only minor offenses). The present study tested the Philadelphia findings, using data from a population of 153 female addict arrestees in Denver during 1973 and 1974. In both cities, data were obtained through the TASC (Treatment Alternatives to Street Crime) diversionary programs. Data as to age, race, and current narcotics use were secured from the jail screening unit interview administered shortly after booking to every cooperating arrestee (only 6% refused to be interviewed). Until the spring of 1974, urine samples were also collected to verify the self-reports of current narcotics use.

RESULTS

Race was significantly associated with arrest for prostitution in both cities. Only 20% of whites in Denver and Philadelphia, compared to almost 50% of blacks, had ever been arrested for prostitution. Only one in five of Denver's Hispanic females had ever been arrested for prostitution, thus exhibiting a similar pattern to whites.

In addition, in Denver, black addicted females were more often charged with all offenses than either white or Hispanic addicted females. All addicted females in Denver tended to be arrested far more frequently than females in Philadelphia (both blacks and whites had approximately twice as many arrests for drug possession and sales as their Philadelphia counterparts). The Denver mean arrest figures for prostitutes and nonprostitutes for narcotics and property offenses were higher than those in Philadelphia, although the averages for other offenses were similar. Denver prostitutes were more frequently arrested than nonprostitutes for narcotics, crimes against the person, and other offenses, but were less frequently arrested for property offenses.

The Denver data on arrest patterns of female addicts bore striking resemblance to the Philadelphia findings. However, the distribution of Denver female addicts among the four groups differed from the distribution found in Philadelphia. Group I (prostitutes/criminals) and Group IV (bag followers) were smaller in proportion; Group II (prostitutes) was about the same; and Group III (criminals) was much larger in comparison to the Philadelphia distribution. The relation between race and group was the same for both cities; blacks were most likely to be found in Group I, and least likely to be found in Group IV; the reverse patterns held for white and, in Denver, Hispanic females.

CONCLUSIONS

High economic rewards and generally low penal sanctions have been associated with the practice of prostitution; therefore, it has been hypothesized that prostitution should be the "hustle of choice" among female addicts. The arrest data from the two cities studied refute this hypothesis; only 40% of Philadelphia, and 33% of Denver, female addict subjects had ever been arrested for prostitution. The data also reject the either/or hypothesis: those who become prostitutes, and those who reject "the life." Instead, four distinct patterns of criminal behavior exist: prostitutes; prostitutes/criminals; criminals; and bag followers.

Weissman, James C.; Marr, Samuel W.; Katsampes, Paul L. Addiction and criminal behavior: A continuing examination of criminal addicts. Journal of Drug Issues, 6(2):153-165, Spring 1976.

DRUG	Opiates
SAMPLE SIZE	200
SAMPLE TYPE	Incarcerated
AGE	Adults (mean 27.4)
SEX	167 Male; 33 Female
ETHNICITY	73 Black; 81 Mexican-American; 46 White
GEOGRAPHICAL AREA	Denver, Colorado
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Official Records
DATE(S) CONDUCTED	1973 - 1974
NO. OF REFERENCES	14

PURPOSE

The relationship between opiate addiction and crime has been investigated by many researchers. The direction of present efforts is largely a result of the disagreement between two early researchers in opiate use, Alfred Lindesmith and Harry J. Anslinger. Lindesmith contended that opiate users became criminals as a result of the criminalization of drug use, while Anslinger maintained that addiction was a result of criminal activity or association. To continue the inquiry into the nature of opiate addiction and criminal behavior, three questions were addressed: (1) Does total arrest activity increase with the onset of addiction? (2) As reflected by both official arrest reports and self-reported data, what are the specific offense activities affected by the onset of addiction? (3) Are patterns of arrest activity associated with differences in age of onset, race, and/or sex?

METHODOLOGY

A sample of 200 self-admitting addicts were interviewed in Denver City Jail during late 1973 and early 1974. Demographic and drug-use data were self-reported by the subjects, and the validity of the demographic items was verified by comparison with official records. Both self-reported and official criminal history data were also collected.

RESULTS

The sample was predominantly male (83.5%), and the principal racial identification Chicano (40%). The mean age of the subjects was 27.4, and 73.5% of the sample were 30 years old or under. An examination of the sample's total criminal activity, during preonset and postonset periods, revealed a considerable increase in criminality associated with the onset of addiction. Mean yearly rates for property-acquisitive crime increased by factors of 258% (larceny), 214% (burglary), and 193% (robbery) from the preonset to the postonset period. Assault showed a mean yearly rate increase of 277%, while impact crime as a whole measured a mean yearly rate increase of 225%. The drug offense mean yearly rate increased 37 times over its preonset level. Eliminating the effect of the drug-arrest factor, the total nondrug arrest mean yearly rate increased 258% during the postonset period.

The sample was divided into three age-of-onset groups: 13-17, 18-21, and 22+. The 13-17 group showed substantial increases in all categories of criminal behavior during the postonset period. Relatively few of these subjects were criminally involved during the preonset period; only 4% failed to record at least one postonset arrest. The 18-21 age-of-onset group displayed a more conservative pattern of increase in postonset criminal activity. Mean yearly rate increases appeared in every offense category, but the level of change was less dramatic. In the 22+ group, mean yearly rate increases were displayed for nearly every offense category; however, lower percentages of persons were involved in postonset arrest activities. In effect, fewer group members were participating in postonset arrest activities, but the active members were displaying higher frequencies of arrest.

Blacks exhibited the highest preonset and postonset mean yearly rates of arrest activity. The mean rate data indicated a tendency among black subjects to incur a disproportionate amount of larceny arrests compared to the other crime categories. Chicanos showed mean yearly rate increases in every offense category. In contrast to the black subjects, the Chicano subjects exhibited a tendency to incur a disproportionate amount of burglary arrests, both preonset and postonset. Whites displayed the lowest preonset and postonset mean rates for nearly every offense category. However, considerable increases appeared in postonset mean yearly rates for every offense category.

Males exhibited mean yearly rate increases within each offense category. Females demonstrated low mean yearly rates for the preonset period, but substantial increases were revealed during the postonset period. Mean yearly arrest rates for female larceny and nondrug offenses--as well as drug arrests--for the postonset period reached levels comparable to the male mean yearly rates.

CONCLUSIONS

The results provide ample data to address directly the three research questions of the study. First, the indication is that the onset of addiction has a distinct and far-reaching effect on total arrest activity. Overall, impact crime arrests showed a two-fold increase during the postonset period, and total nondrug arrests increased two-and-one-half times during this period.

The effects of the onset of addiction within specific offense categories was the second area of study concern. The official arrest data revealed a pattern of extensive rather than individual category increases in postonset arrest activity.

Discernment of distinctive arrest patterns relative to age of onset, race, and sex was the third area of study. With regard to the age-of-onset groupings, the data showed that the 13- to 17-year-old age-of-onset group demonstrated the most dramatic postonset arrest rate increases; the degree of increase, however, reflected the negligible preonset rate pattern among this group. Blacks had the greatest overall arrest activity, and males had higher total arrest rates than females. The findings suggest that more attention should be devoted in future studies to the different effects associated with the age-of-onset, race, and gender subgroups.

Drug Laws and the Criminal Justice System

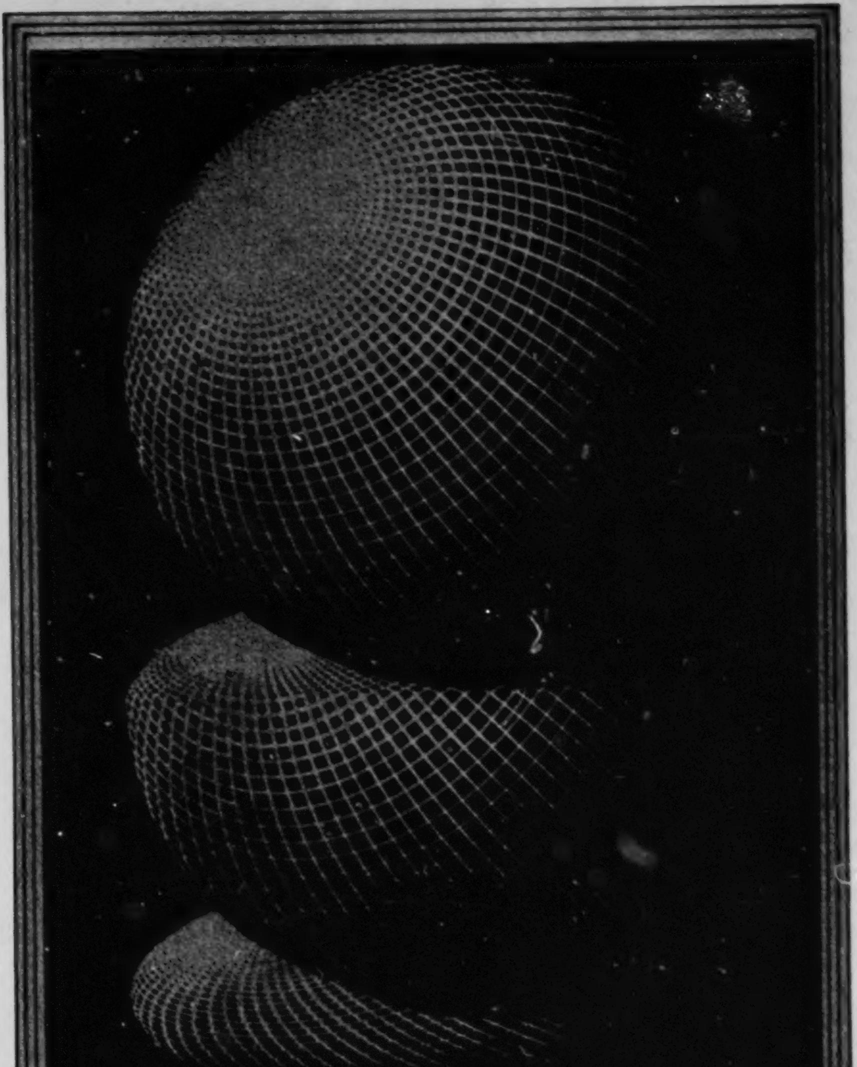


Illustration:

Three Spheres
M.C. Escher
Gift of C.V.S Roosevelt
National Gallery of Art, Washington, D.C.

Burkett, Steven R., and Jensen, Eric L. Conventional ties, peer influence, and the fear of apprehension: A study of adolescent marijuana use. Sociological Quarterly, 16:522-533, 1975.

DRUG	Marihuana
SAMPLE SIZE	1,056
SAMPLE TYPE	High School Students
AGE	Adolescents
SEX	546 Male; 510 Female
ETHNICITY	White
GEOGRAPHICAL AREA	Washington
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	24

PURPOSE

Although recent empirical analyses generally support the view that the incidence of deviant conduct is inversely related to the perceived certainty of its detection and apprehension, little research has focused on the relative importance of various types of sanctions. A study of high school students was undertaken to determine the relationship between (1) perceived certainty of apprehension and marihuana use, (2) the degree of involvement in and attachment to the family and marihuana use, and (3) the degree of involvement with others who use marihuana and both marihuana use and the belief in the certainty of apprehension.

METHODOLOGY

A total of 546 white male and 510 white female high school students in Washington were surveyed. The subjects were asked to state their level of involvement with marihuana, the extent of their ties to conventional others (family, parents, school), their estimate of the likelihood of apprehension for marihuana use, and the extent of their involvement with other users of marihuana.

RESULTS

Self-reported marihuana use was inversely related to the belief that one's own use was likely to result in apprehension. Use was least likely among those who indicated that they probably would get caught should they try; conversely, of those who indicated that they probably would not get caught, 72% of the males and 66% of the females reported having at least tried marihuana. While the data indicate that those with less conventional ties were more likely to use marihuana than those who maintained strong attachments to conventional others, it was apparent that the fear of apprehension served as an independent source of control. For example, for those low on attachment to parents, the percent using marihuana went from 5% for those who had high fear of apprehension to 46% for those with low fear; for those high on attachment to parents, the comparable percentages were 1% and 45%. Therefore, while the law does not stand alone relative to conventional ties, the findings suggest that it may be an important factor in deterring use.

Regarding peer influence and belief in apprehension, only 18% of those who reported having no close friends who used marihuana indicated that they would probably get away with it if they tried; in comparison, 79% of those who reported that most of their friends were users stated they probably would not get apprehended. For those with no involvement with other users, the percent using went from 1% for those with high fear to 4% among those with low fear; on the other hand, among those deeply involved with other users, the comparable percentages were 47% and 70%. The impact of fear of apprehension is greatest among members of drug-using groups; this holds despite the fact that most of these subjects doubted they would be apprehended. Conversely, among those with few, if any, friends who used marihuana, the law appears to have little impact on use. This means that involvement with nonusing peers is, by itself, a potential source of control.

The data indicated that peer influence was greater than conventional ties in determining drug use. Of those with few or no friends using marihuana, those with low attachments to the family and school were no more likely to use marihuana than were those with strong conventional ties. Thus when conventional ties are broken, youth are unlikely to engage in marihuana use in the absence of support from others who use marihuana.

CONCLUSIONS

The findings indicate that the belief that one's use of marihuana will result in apprehension is strongly and inversely related to self-reported use of marihuana. Further, it appears that conventional ties (to the family and school) may serve as sources of control independent of the belief examined. Of particular importance, however, is involvement with others who use marihuana. Marihuana use is unlikely given the absence of group supports and reinforcement for beliefs which discount the fear of apprehension. When wide moral support for an offense-specific law is absent, the law is likely to "stand alone" as a deterrent principally among members of groups specifically oriented toward the behavior in question--groups whose values and norms are not supportive of the law. But, even in this situation, the effectiveness of the law is questionable given the strong reinforcement for beliefs which discount the certainty of apprehension.

California. Health and Welfare Agency. A First Report of the Impact of California's New Marijuana Law (SB 95). Sacramento: the Agency, January 1977. 50 pp.

PURPOSE

In July of 1975, the California legislature enacted Senate Bill 95, which reduced the penalties for possession of marihuana. Effective January, 1976, the new law made possession of one ounce or less of marihuana a citable misdemeanor with a maximum penalty of $100. A study was undertaken to assess the first year under the new law. Issues addressed in the study related to changes in marihuana-law enforcement, criminal justice system costs, drug treatment program enrollments, marihuana usage, and public attitudes toward criminal sanctions. A variety of sources such as arrest and citation data, workload and impact surveys, budgets and revenues, and public opinion polls were reviewed and analyzed.

SUMMARY

Enforcement of Drug Laws

Arrests and citations for marihuana possession in the first six months of 1976 decreased 47% for adults, and 14.8% for juveniles, compared to the same period in 1975. Adult arrests for possession of drug paraphernalia declined 37% in the first half of 1976 compared to the same period in 1975, and juvenile arrests decreased 88.5%. There was also a dramatic decrease (90%+) in both adult and juvenile arrests for visiting a place where drugs were being used.

Police agency costs to enforce marihuana possession laws for adults in the first half of 1975 were $7.6 million compared to $2.3 million in the same period of 1976. SB 95 also brought about a reduction in marihuana-case processing costs in the court system, from $9.4 million in the first half of 1975 to $2 million in the first six months of 1976. Prosecutor costs in the first half of 1975 were $2.9 million compared to nearly $700,000 during the same period in 1976. For the same periods, public defender costs were approximately $2.1 million and $500,000, respectively. Adding the estimated law enforcement costs to the known judicial costs, the total of $17 million for half of 1975 compared to $4.4 million for half of 1976 represented a 74% reduction in costs.

While adult arrests for possession of marihuana decreased between 1975 and 1976, adult arrests for nonmarihuana felony drug offenses increased 18%, and for persons under the influence of heroin, arrests increased 48%. Arrests of adults and juveniles driving under the influence of a drug in the first half of 1976 increased 46% and 71%, respectively, over the same period in 1975, although the data did not indicate which drug was used. Narrative reports from local and state law enforcement agencies suggested that the number of drivers using drugs alone or in combination with alcohol had been increasing.

Use of Marihuana and Attitudes Toward the New Law

A survey conducted in November, 1976, found that while 35% of adults reported having at least tried marihuana, 14% considered themselves current users. Less than 3% reported that they first tried marihuana within the previous year, and only 1 in 8 of this number said they were more willing to try marihuana or to use it more often because penalties had been reduced.

In the same survey it was found that one in four California adults favored the approach of the new state law. A more liberal position of legalizing the sale or possession of a small amount of marihuana was favored by 38% of those responding, while 29% favored stiffer penalties. Younger adults and those who had used marihuana took a more liberal view; however, except for those over 60 years of age, every age group preferred either the new law or legalization. Even among those who reported never having used marihuana, 17% favored stiffer penalties, 27% favored the current law, and 19% preferred legalization.

Treatment Services

In 1975, statewide diversions were 85% marihuana-related and 15% hard drug-related, while in 1976 diversions were 50% marihuana-related and 50% hard drug-related. Overall, between 1975 and 1976, the diversion population was reduced by 14,586 marihuana offenders and increased by almost 2,300 hard drug offenders, including over 2,000 heroin offenders. In general, drug program resources used for social and recreational marihuana divertees were minimized in most California counties. However, while SB 95 may have reduced somewhat the enrollments in programs serving marihuana divertees, the increase in arrests and diversion of hard drug offenders has more than offset any savings to the state's drug abuse program.

Johnson, Weldon T.; Petersen, Robert E.; and Wells, L. Edward. Arrest probabilities for marijuana users as indicators of selective law enforcement. American Journal of Sociology, 83(3):681-699, 1977.

DRUG	Marihuana
SAMPLE SIZE	1,799
SAMPLE TYPE	General Population; Drug Arrestees
AGE	Adults
SEX	Both Sexes
ETHNICITY	White; Black
GEOGRAPHICAL AREA	Cook County, Illinois; Washington, D.C.; Douglas County, Nebraska
METHODOLOGY	Secondary Analysis
DATA COLLECTION INSTRUMENT	Questionnaires; Police Records
DATE(S) CONDUCTED	1971-72
NO. OF REFERENCES	28

PURPOSE

The relationship between deviant actions and social reactions is often unclear. In accounting for the likelihood of sanctioning, the deviant act can be regarded as only one relevant factor; other factors that influence the probability of sanctioning include certain characteristics of the actor, the sanctioning agency, and the community in which social control occurs.

A study was conducted to explore the question of explicable differences in estimated arrest probabilities according to certain social characteristics of suspected offenders and features of the jurisdictions in which those arrests occurred. Attention was directed toward marihuana use, an offense for which the disparity between the occurrence of an initial act and an enforcement reaction--and hence the opportunity for selective law enforcement--is generally thought to be extreme.

METHODOLOGY

The data utilized were collected for the National Commission on Marihuana and Drug Abuse in two separate but related studies of the characteristics of marihuana users and arrestees. In this study, data were analyzed for those subjects who lived in three jurisdictions: a high-penalty area (Cook County, Illinois); a low-penalty area (Douglas County (Omaha), Nebraska); and an intermediate penalty area (Washington, D.C.). Information included data obtained from survey questionnaires and arrest records obtained from police files. Estimation of arrest probabilities involved aggregate-level computations, yielding ratios rather than actual proportions to estimate the jurisdiction-specific probabilities. Rates of both marihuana use and marihuana arrest (each expressed per 100,000 persons, 18 years or older) were computed from the two data files for each jurisdiction overall and for selected demographic subgroups within each jurisdiction. The separate estimated user and observed arrestee rates were then combined to form an estimate of the proportion of persons using marihuana who had also been arrested for such use. "Risk of arrest" was computed by the ratio of the arrest rate to the estimated user rate (expressed per 100,000 users, 18 years or older).

Additional data were gathered from police records on the arrest encounter itself and antecedent events. These data included information about the number of persons included in an arrest, the spacial location of arrest, the type of police officer involved, the occurrence of a prior drug-related investigation, the type of enforcement activity leading to detection and arrest, and prior arrests.

RESULTS

Both arrest/use ratios were higher in Cook County and lower in Washington; Douglas County was intermediate. In other words, the probability of arrest for marihuana users was highest in Cook County and lowest in Washington. The relationship of the magnitude of the arrest/use ratios for the jurisdictions was approximately: 2½ : 1½ : 1. The difference in ratios was produced by a substantially higher arrest rate in Cook County.

Larger gender differences appeared in Cook County than in Washington, and were smallest in Douglas County. In all jurisdictions, males had substantially higher arrest/use ratios than females; overall, male ratios were about five times larger although this varied across jurisdictions. The gender differences in arrest/use ratios were attributable primarily to arrest-rate differentials.

Arrest/use ratios varied by occupational status and these relationships were consistent across jurisdictions. Blue-collar workers had the highest arrest/use ratios and white-collar workers the lowest; students fell in the middle range. The high ratio for blue-collar workers was based on this group's high arrest rate coupled with a relatively low user rate. Students also had a high arrest rate, but the arrest/user ratio was lower because student user rates were the highest of the three occupational categories. The white-collar group had a moderately high user rate but it was coupled with the lowest arrest rates.

The effect of race on the arrest/user ratio was not consistent across jurisdictions. Racial differences were largest in Cook County and relatively small in Washington and Douglas County (except for current users). In Cook County, blacks had substantially higher ratios than nonblacks--at least twice as large. This difference was due to the arrest rates of blacks (nearly four times larger than those for nonblacks). Also, the effect of age was not consistent across jurisdictions. The largest age differences were again found in Cook County; the differences in the other two counties were generally smaller. In Cook County, persons 25 and under had higher arrest/use ratios than did persons over 25.

Regarding the data on the arrest itself and the surrounding circumstances, the supplemental data on the arrest encounter indicated that: (1) males, rather than females, were more often arrested by general patrolmen, often in vehicles; more often arrested alone; and more often had prior records. Arrest of females more often involved investigative policing where apprehension occurs in an indoor nonpublic location. (2) Student arrestees were less often targets of prior investigation. Arrests of students usually involved spontaneous patrol/citizen encounters, often in connection with a vehicle stop. Also, arrests of blue-collar workers, in comparison to arrests of white-collar workers, were somewhat more likely to result from spontaneous police contact, and to involve persons with prior records. (3) In all jurisdictions, younger persons (25 years and under) were more often arrested in vehicles and groups than older arrestees, while older persons arrested often had prior records and were arrested in an indoor context. (4) In Cook County, the apprehension of blacks, compared to arrests of nonblacks, was less often the result of prior drug-related investigations, and more often occurred in the "street."

Overall, the high probability group included nonblack males 25 and under, black males 25 and under, and black males over 25. The low probability group included all females and nonblack males over 25. In each jurisdiction, arrests of persons in the high arrest probability group, compared with those in the low probability group (1) more frequently involved persons with a prior arrest record; (2) less often resulted from a prior investigation, except in Douglas County; (3) more often involved apprehension of a single suspect; (4) more often occurred in a public location; (5) more often involved spontaneous contact with police; and (6) more often were carried out by general patrolmen.

In general, the groups most liable to arrest were also those groups with least access to privacy and whose arrests most frequently involved discovery in a public context (i.e., in vehicles; in the street; or in off-street, in-view settings). Cues (persons or behavior being coded into "suspected" categories) may also have been an important factor. The general overrepresentation of young, blue-collar males may have reflected either a greater visibility of these persons and their marihuana use to the police, or a police predisposition to search persons with these characteristics.

CONCLUSIONS

Sociodemographic variations in the estimated arrest probabilities showed that arrest probabilities were higher for males and blue-collar workers in all three jurisdictions. Other effects were more clearly jurisdictionally specific: in two jurisdictions, persons under 25 had higher arrest probabilities than older persons; in one jurisdiction, arrest probabilities were higher for blacks than for nonblacks. It appears that both social location of marihuana use and suspicion cued by certain sociodemographic characteristics of marihuana users are equally tenable explanations of these arrest probability differentials.

Leon, Jeffrey S. Public policy and judicial perspectives in two Canadian cities: The case of heroin. Journal of Drug Issues, 6(2):172-181, Spring 1976.

DRUG	Opiates
SAMPLE SIZE	73
SAMPLE TYPE	Judges
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Toronto and Vancouver, Canada
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Questionnaire
DATE(S) CONDUCTED	Summer 1973
NO. OF REFERENCES	12

PURPOSE

While social control efforts may assume a variety of forms, regulation of the use of drugs in Canadian society has generally been based on legal controls. Central to the application of legal rules, as part of the criminalization process, are the notions of discretion and deterrence. In evaluating drug control policies, researchers might therefore direct attention to the interpretation of policy decisions by those within the criminal justice system. The ideological perspectives of judges in two Canadian cities towards heroin offenses and offenders were examined.

METHODOLOGY

In the summer of 1973, responses were elicited from judges at all levels of the judiciary in Vancouver and Toronto to several scaled questionnaire and interview items related to the use and distribution of heroin, and the treatment and control of this activity. An attempt was made to contact each member of the judiciary by telephone to arrange a semistructured interview. Twenty-four (45.3%) Vancouver judges, and 20 (23.3%) Toronto judges responded and were interviewed. In sum, forty-four (31.7%) responded to the questionnaire and 29 (20.9%) were interviewed.

RESULTS

There were more convictions in British Columbia (459) than in Ontario (89) for simple possession of heroin, but fewer convictions for possession for the purpose of trafficking (72 in British Columbia; 43 in Ontario) and trafficking (54 in British Columbia; 29 in Ontario). Sixteen Vancouver judges and 14 Toronto judges felt incarceration was appropriate for trafficking of heroin; 17 Vancouver and 19 Toronto judges felt the same about importing. In contrast, a majority of judges did not view incarceration as an entirely appropriate response to simple possession of heroin (Vancouver: 5 appropriate, 3 somewhat appropriate, 6 somewhat inappropriate, 6 inappropriate; Toronto: 5 appropriate, 1 somewhat appropriate, 10 somewhat inappropriate, and 3 inappropriate). Furthermore, while 19 (95%) of the Vancouver judges and 17 (94.4%) of the Toronto judges reported at least some need for a variety of treatment facilities to deal with heroin users, the judges in both cities were divided in their views of heroin use as a legal or medical problem: seven Vancouver judges (35%) said it was both legal and medical; 7 Toronto judges (36.8%) said it was mostly medical. Vancouver judges did differ in opinion from Toronto judges in their agreement with the propositions that increased heroin use had led to an increase in property crimes (14 Vancouver judges agreed; 5 Toronto judges agreed) and that the use of marihuana frequently leads to the use of heroin (9 Vancouver judges agreed; 1 Toronto judge agreed).

CONCLUSIONS

The data were not obtained from a representative sample of judges, and the results should be examined cautiously, and should not be construed to reflect the views of a total population of judges in either city. There appears to be a trend away from viewing heroin use as solely a legal matter requiring a legal response. With a wide range of sentences available, judges may, as indicated by some of their comments, vary a great deal in their sentencing behavior, regardless of views on the medical or legal classification of heroin use. Still, the implications of limiting judicial discretion in the sentencing of drug offenders have yet to be fully explored. Short of decriminalizing drug-using behavior, satisfactory alternatives to ensure fairness are not readily apparent.

Ottomanelli, Gennaro A. Follow-up of a token economy of civilly committed narcotic addicts. International Journal of the Addictions, 11(5):793-806, 1976.

DRUG	Heroin
SAMPLE SIZE	31
SAMPLE TYPE	Civilly committed
AGE	Adults (mean: 20.5)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Observation; Program/Clinic Statistics; MMPI
DATE(S) CONDUCTED	October 1969 - September 1970
NO. OF REFERENCES	8

PURPOSE

In the 1970's, a growing interest has developed in the use of the token economy procedure to reinforce socially approved behavior. A token economy project at the Bayview Rehabilitation Center, which involved 31 civilly committed heroin addicts, was evaluated to determine the efficacy of the token economy.

METHODOLOGY

Subjects were 31 male heroin abusers certified under the New York Mental Hygiene Law and committed to the New York State Narcotic Addiction Control Commission. Their mean age was 20.5 years, and most came from a low-income population. Criteria for subject selection were the absence of overt psychosis, and no prior civil commitment. All subjects took part in a token economy project conducted from October, 1969, to September, 1970, at Bayview Rehabilitation Center located in New York City. The project was designed to evaluate the subjects' performance in three program areas: (1) group therapy; (2) education; and (3) ward behavior. Satisfactory performance would merit a total of 72 points per biweekly pay period, with a total of 936 points required to earn approval for aftercare. Subjects were tested with the MMPI within two weeks after admission and again when they earned the requisite 936 points. During aftercare, the subjects' satisfactory behavior included reporting regularly to narcotic aftercare officers (NAO), not participating in illegal activity, abstaining from drugs, and planning and implementing vocational and financial goals.

RESULTS

The MMPI profiles were valid for 26 of the subjects. With the exception of the D scale ($p<.05$), the decreases across scales were minimal between pretest and posttest scores. For the follow-up of community adjustment, the aftercare adjustment of the token economy group was compared to three other groups of addicts who had been committed to the Bayview Rehabilitation Center. There was no significant difference in adjustment between the subjects in the token economy and those subjects who had not participated in the project. With the exception of one comparison group that had a very poor outcome (9% reporting regularly to aftercare, while 91% violated aftercare regulation), the token economy and two other comparison groups had about equal proportions of persons regularly reporting to aftercare (between 20% and 30%), and violating aftercare regulations (between 70% and 80%). This mean "success" rate of about 25% is comparable to the rate found in other therapeutic programs (Brill and Lieberman, 1969; Zimmerman, 1974).

Regarding the acceptance of the token economy, the subjects competed openly and rigorously for additional credits in an effort to earn aftercare approval as quickly as possible. Prior to the inception of the token economy, energetic participation in the treatment facility's program was frequently disapproved by the resident's peers. For the participants in the token economy, however, the rapid acquisition of the requisite 936 points received the approval of peer group and treatment staff. Regarding length of institutionalization, 6 months appeared to be the pivot for the effect of length of intramural stay. Increasing intramural stay did not appear to have a concomitant increase in community adjustment.

CONCLUSIONS

The token economy has a substantial impact on the participants' institutional adjustment but has little influence on the evaluative dimensions of personality change and rate of aftercare retention.

Rinella, Vincent J. Rehabilitation or bust: The impact of criminal justice system referrals on the treatment of drug addicts and alcoholics in a therapeutic community (Eagleville's experience). American Journal of Drug and Alcohol Abuse, 3(1):53-58, 1976.

PURPOSE

Eagleville Hospital and Rehabilitation Center in Pennsylvania is a therapeutic community treating alcoholics and heroin addicts, utilizing group therapy as the major therapeutic modality. In the first 5 to 6 years of its existence, most of the participants in the program had volunteered for treatment. In the following two years, the majority of clients were admitted as a result of some immediate and direct action of the criminal justice system. An evaluation was made of the impact of these criminal justice system referrals on the treament program, particularly on the attitudes of both staff members and residents.

SUMMARY

Even though the type of clients changed from volunteers to criminal justice system referrals, the position of the directors of the Eagleville facility was that the hospital would devote its energies to rehabilitating those individuals with substance abuse difficulties irrespective of their criminal justice background. In fact, the impact of the criminal justice referrals had no discernible implications in terms of treatment outcome. Both addicts and alcoholics referred to Eagleville stayed in inpatient treatment as long as or longer than noncriminal justice system referred clients. In addition, referral clients did as well as or better than other clients, in terms of abstinence of at least 6 months duration, 2 years after entering inpatient treatment.

The change in type of client did affect the program, however, particularly in terms of attitudes of staff and residents. Many of the criminal justice system referrals viewed Eagleville as simply another phase of incarceration. This had a profound impact on staff attitude. Despite the absence of formal physical restraints, the tone of community life became more custodial. The treatment process began focusing on modifying criminal identities rather than addictive identities alone. Also, dismissal of a justice system referral from the program with an irregular discharge was perceived by the staff as giving rise to reincarceration. Therefore, many residents were unwilling to "snitch" on their fellow residents, and staff members often overlooked infractions. This new behavior seriously undercut the open and honest environment which is the heart of any therapeutic community. In addition, the change in attitude was not always due to sympathy for the justice system referral; often, threats of physical violence or retaliatory petty thievery awaited staff members or residents who dared to be honest.

Another untoward effect on staff involved a growing feeling that their authority and control over the rehabilitation process was compromised by the apparent rigidity of the courts and the parole and probation system. Staff members spent significant amounts of time accompanying clients to court to inform judges of their progress or lack of same, and informing them about the structure of the treatment program. Many staff felt frustrated because so much of their and the residents' time was wasted until pending legal matters were satisfied.

CONCLUSIONS

Based on the experience at Eagleville, it is suggested that there should not be a large majority of people from the criminal justice system in the program, nor should too many persons from the same prison be accepted at any one time. Serious consideration should be given to clearing open court cases before admitting clients to a rehabilitation process removed from the criminal justice system. Consideration should also be given to some appropriate transitional process to bridge life in a prison to life in a therapeutic community.

Rosenthal, Michael P. The legislative response to marihuana: When the shoe pinches enough. Journal of Drug Issues, 7(1):61-77, 1977.

PURPOSE

Marihuana is today the third most widely used recreational drug in the U.S. (after tobacco and alcohol), and the most widely used illicit drug. The reduction of penalties for possession of marihuana for personal use--and in some cases, distribution--was one of the most important legal developments in the late 60's and the 70's. An examination of this development was undertaken to elucidate why and how the marihuana laws were changed.

SUMMARY

As recently as 1967, marihuana was generally classified by American law with narcotics. Under federal law, marihuana penalties were the same as those for narcotics, and were quite harsh; some federal offenses carried from 5 to 20 years of imprisonment for a first offense; even the lightest violation carried a term of from 2 to 10 years for a first offense. State penalties were also severe, and most offenses were felonies. Marihuana was classified as a narcotic under the Uniform Narcotic Drug Act. Simple possession was prohibited in all states, and some states also prohibited use. Simple possession of any quantity was a felony in most states; penalties for marihuana offenses were not distinct from penalties for narcotics offenses in most states.

Change began in 1968 when Alaska, California, and Vermont reduced possession penalties. In the following two years, many more states followed suit. Although the changes were small, in many states possession for personal use was lowered for a first offense to a misdemeanor carrying a maximum one-year jail sentence. Some states lowered sentencing to no more than 6 months in jail, and Nebraska in 1969 took the giant step of making first-offense possession punishable by only 7 days in jail. In late 1970, Congress enacted the Controlled Substances Act, a major landmark in the history of American drug control. By this legislation, marihuana was classified as a hallucinogen. The Act repealed virtually all earlier federal drug control legislation, including the Harrison Narcotic Act, the Narcotic Drug Import and Export Act, and the federal Marihuana Tax Act. The Act reduced marihuana penalties for possession, trafficking, and distribution. It made first-offense simple possession of all controlled drugs--from heroin to marihuana--a misdemeanor subject to a maximum of a year's imprisonment and/or a fine of not more than $5,000. To reduce stigmatization of first-offender possessors, the Act made provision for "conditional discharge" (receiving one-year probation without entry of a judgment of guilt), and a procedure for expungement of records of young offenders. Over 40 state legislatures enacted drug control legislation modeled on the federal act.

Under the Controlled Substances Act, the National Commission on Marihuana and Drug Abuse was created. The Commission was entrusted to conduct a study of marihuana, including an evaluation of marihuana laws. In 1972, the Commission issued a report that recommended the changing of federal law such that possession of marihuana for personal use would no longer be an offense--although possession of marihuana in public would remain contraband--and that casual distribution of small amounts for no remuneration, or insignificant remuneration not involving profit, would no longer be an offense. The Commission also recommended that state laws be similarly changed. The Commission report played a major part in the continued reduction in marihuana penalties thoughout the U.S. In 1973, Texas repealed the most stringent law in the country (even a first-offense possessor could be sentenced to life imprisonment). Only Arizona and Nevada have made no changes; in Arizona, the prosecutor and judge have the discretion to treat possession as either a felony or a misdemeanor; in Nevada, adult possessors are judged to be felons. In 1973, Oregon was the first state to enact legislation to provide that unlawful possession of less than one ounce of marihuana was a "violation" punishable by a fine of not more than $100. Several states followed in 1975. California, in one step, moved from a law that still permitted simple possession to be treated either as a felony or a misdemeanor by the prosecutor or judge, to a law that made possession of one ounce punishable by a fine of not more than $100. Similar laws were enacted in Colorado, Maine, Ohio, Alaska, Minnesota, and

South Dakota. The sale of marihuana (under certain circumstances) is now treated as a misdemeanor, rather than a felony, in many states.

What was extraordinary about the legislative developments was the speed with which they occurred. Penalty reduction began in 1968, and reduction of first-offense possession to misdemeanor levels was practically complete by the end of 1971. Change had actually been foreseeable for some years. In 1966, the New York County Medical Society recommended that possession penalties be reduced. In its 1967 report, the National Crime Commission objected to mandatory sentences for narcotics and marihuana offenses, and recommended giving discretion to the courts and correctional authorities to deal flexibly with violators. Probably the major reason the legislatures acted so quickly was that, for the first time in American history, the children of the dominant class were being criminalized on a large scale. In criminalizing the children of white middle-class America, the marihuana laws exposed them and their parents to all the costs and unpleasantness associated with criminal laws in general. In short, legislatures acted quickly because the "shoe pinched." Also in the late 60's and early 70's, the "credibility gap" was at its widest. Its biggest cause and manifestation was the war in Vietnam. Since marihuana was a symbol of the loss of credibility, reduction of marihuana-possession penalties was perhaps, the simplest way to make concession to the dissatisfied.

CONCLUSIONS

As the National Commission on Marihuana and Drug Abuse had hoped, marihuana now is less laden with symbolization than it once was, and hence policy toward it may be made more rationally and calmly than it once was. Whether marihuana will be legalized like tobacco and alcohol is hard to say. The amelioration movement points in that direction, but it need not necessarily go that far. For instance, each change made in the law may reduce the perceived need for additional change. Also, there is much room for nonenforcement of prohibitory laws, without legalization or regulation.

Stuart, Richard B.; Guire, Kenneth; and Krell, Mark. Penalty for the possession of marijuana: An analysis of some of its concomitants. Contemporary Drug Problems, 5(4):553-563, 1976.

DRUG	Multi-Drug; Marihuana
SAMPLE SIZE	Not Specified
SAMPLE TYPE	High School Students
AGE	Not Specified
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Ann Arbor, Michigan
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1972-1975
NO. OF REFERENCES	6

PURPOSE

Drug law policy has often been viewed as responding to short-term crises rather than long-term needs. Public discussion resulted in frequent and significant changes in the drug laws of Ann Arbor, Michigan, after residents became aware of an unusually high rate of drug use. Removal and reinstatement of penalties for the possession of marihuana were of particular interest. Concomitant changes in drug use patterns among high school students were observed between 1972 and 1975 to assess the impact of change in legal status for possession of marihuana.

METHODOLOGY

Between 1972 and 1975, yearly questionnaire surveys measuring high school drug use and attitudes were conducted in Ann Arbor and three surrounding communities. Random samples included participants from upper-middle class and suburban Ann Arbor; semi-rural Chelsea; industrial Willow Run; and Dearborne, the site of a large division of the University of Michigan.

RESULTS

Comparing responses to yearly surveys, it was found that by 1975, 65% of Ann Arbor students reported use of marihuana at least once, as did 59% of their counterparts in the other communities. Approximately one-fourth of all students used marihuana daily or weekly. Slightly over half had experimented with hard drugs--with LSD, amphetamines, barbiturates and opiates being the order of preference. Eight percent of Ann Arbor students reported current use of at least one hard drug, as did 23% of those sampled in Chelsea, Dearborne and Willow Run. Three to six percent of students in the outlying communities reported frequent use of hard drugs while only one percent of Ann Arbor students did so.

During the first year of the study, more Ann Arbor students reported marihuana use than did those of Chelsea, Dearborn and Willow Run. In subsequent years, however, percentages of all students using marihuana became similar. In 1972, a slightly greater percentage of Ann Arbor students admitted frequent use of hard drugs, but over time the percentage of users in the other communities surpassed that of Ann Arbor.

In response to questions concerning removal of penalties for possession of soft and hard drugs, 80% of the students favored no penalty for alcohol, 25% favored decriminalization for marihuana, and 11%-25% favored decriminalization for hard drugs. Attitudes favoring liberalization were generally found more often among users than nonusers. While in Ann Arbor nonusers and those who used marihuana infrequently were more likely to favor decriminalization than their peers in Chelsea, Dearborne and Willow Run, these differences disappeared among monthly users.

Estimating the impact students thought decriminalization might have upon drug choice, one in eight reported that they did not and would not use alcohol, 2 in 5 indicated they were not potential users of soft drugs, and 4 of 5 responded similarly when questioned about hard drugs. When asked if decriminalization would encourage heavier drug use, the majority of positive responses were among high-level users. Nine percent of those in Ann Arbor who were not using soft drugs thought they might experiment, and only 1%-3% indicated they might try hard drugs. Frequent change in legal status of marihuana possession and use appeared to have minimal effect on student use of marihuana or any other drug. After 4 years of drug policy change, use patterns in Ann Arbor resembled those of Chelsea, Dearborne, and Willow Run, as well as those outside the state.

Attitudes towards decriminalization were apparently related to individual rate of drug use. Nonusers did not anticipate becoming users. Infrequent users did not foresee an increase in use. Only frequent users thought decriminalization might encourage consumption increase.

CONCLUSIONS

It is possible that swiftly enacted social reforms may be slow to have an impact upon behavior. In Ann Arbor, changes in the law may have needed more time before they were translated into changes in adolescents' use of drugs. But the fact that students' illegal drug use was already widespread indicates that adolescents were not strongly influenced by the legal status of the drugs they were using. This is further supported by indications that students thought that changes in the law would have little effect upon their decisions concerning drug use. Therefore, while laws relating to drug use may have an important impact upon adults' behavior, the laws seem to have minimal impact upon adolescents' drug use. If this finding is repeated in other jurisdictions, it should lead to serious questioning of one of our more commonly accepted approaches to shaping the behavior of youth--recourse to law. It would also question the wisdom of spending large sums of money to enforce laws which may be unenforceable in most instances and which frequently result in alienation of the populations which they are intended to protect.

Zinberg, Norman E., Jacobson, Richard C.; and Harding, Wayne M. Social sanctions and rituals as a basis for drug abuse prevention. American Journal of Drug and Alcohol Abuse, 2(2): 165-182, 1975.

DRUG	Hallucinogens; Marihuana; Opiates
SAMPLE SIZE	57
SAMPLE TYPE	General Population
AGE	Adolescents; Adults (14-70)
SEX	43 Male; 14 Female
ETHNICITY	48 White; 9 Black
GEOGRAPHICAL AREA	Massachusetts
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	19

PURPOSE

Nonmedical use of marihuana, cocaine, heroin and hallucinogens has increased over the last decade. Prohibition of illicit drugs has been the dominant cultural response. It was the purpose of this study to point to the possibility of minimizing the social costs of illicit drug use via social control. The study was based on the assumption that there exists a wide variety of illicit drug users including some who, like most users of alcohol, manage to moderate and control their drug consumption and to avoid abuse. As part of an ongoing study, the specific aims were to (1) locate and describe controlled users of marihuana, psychedelics, and opiates; (2) describe various patterns of controlled use; and (3) identify factors which assist in the development and maintenance of controlled use.

METHODOLOGY

A total of 57 controlled drug users were obtained through solicitation of youth groups, halfway houses, schools, drug clinics, social and professional agencies, advertisements in the underground press, and other sources. Their ages ranged from 14 to 70 years, with the majority in the 19-22 bracket; there were 9 blacks and 48 whites, 43 males and 14 females. All subjects had to have used marihuana, a psychedelic, or an opiate for at least a year; they had to have used the drug frequently enough to be considered a regular user, but not so frequently that they were physically dependent on it (an opiate) or that the level of use was likely to interfere with effective social and personal functioning.

Subjects were interviewed to obtain information on demographic characteristics, family history, physical and mental health status, peer relationships, social activities, drug use history, drug attitudes, set and setting of drug use, and the degree of separation between the users' attitudes toward drugs and those of their peers and the larger culture.

RESULTS

The majority of the controlled users maintained regular and usual relations with institutions such as school and work and close social ties to nondrug users as well as users. None manifested serious psychological or social impairment as a result of controlled use. More so than marihuana users, psychedelic and opiate users were likely to have developed a fairly rigorous schedule for use. For example, several opiate users restricted their use to weekends, and had been doing so for 10 years. For the majority of users, commitment to work or school limited their drug use to leisure time. Most users stated they never used drugs alone, used them rarely at work or school and never with strangers, used them only in specific settings, and limited their expenditures for drugs.

An important factor in the controlled use of drugs was the effect of the drugs themselves. Regarding opiates, all users were keenly aware of the possibility of becoming addicted; this contrasts with the usual view that the user never believes getting "strung out" can happen to him. With marihuana and psychedelics, the data indicated the properties of the drugs themselves aided in developing controlled using patterns. Those psychedelic users who appreciated the drug's capacity to alter consciousness found use to be functional only when it was infrequent. The marihuana users found they could control their marihuana high and function normally if it became necessary.

Most of the users were successful at achieving controlled use because of their early alcohol education, a consistent relationship to social institutions despite feeling deviant, and especially through the development of group sanctions and group-specific rituals which limited and sustained use. All subjects differentiated themselves from addicts and abusers and condemned the latter's compulsive use of drugs. Controlled heroin users limited their contact with addicts to occasions when it was necessary to obtain the drug. Peer-using groups redefined drug use as an acceptable social activity, and accepted and reinforced the users' attachment to regular social institutions and continued relations with nondrug users.

CONCLUSIONS

Drug subcultures can provide rituals and sanctions which limit and control use. This strongly suggests that a culturally based, elaborated system of social control, similar to the social control over alcohol, is a viable alternative to prohibition for minimizing drug abuse. The goal is not to encourage drug use; rather, it is to remove the deviant status of controlled users so that they are susceptible to the moderating, limiting, and powerful influence of social sanctions. Drug use has consistently been presented as an either/or phenomenon where the decision to use is equated with a voluntary choice of deviance; this leaves little room for human flexibility, curiosity, and mutual learning and teaching. Seeing the choice as limited to either abstinence or compulsive use removes any user of illicit drugs from much of the control that society can provide.

Sexual Behavior

Burdsal, Charles; Greenberg, Gary; Bell, Maxine; and Reynolds, Steve. A factor-analytic examination of sexual behaviors and attitudes and marihuana usage. Journal of Clinical Psychology, 31(3):568-572, 1975.

DRUG	Marihuana
SAMPLE SIZE	358
SAMPLE TYPE	College Students
AGE	Adults (mean 21.2)
SEX	138 Male; 220 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Wichita, Kansas
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	15

PURPOSE

According to various researchers, college students report a varied history of sexual practice, but also appear to be misinformed about basic matters such as contraception and often have guilt feelings about their sexual activities. In order to further explore the sexual attitudes and behavior of young adults in regard to various issues including drug use, a sample of Midwestern college students was studied.

METHODOLOGY

A questionnaire containing items on sexual attitudes and behaviors, family relationships, and drug usage was administered to 358 volunteer undergraduate students at Wichita State University. The sample included 220 females and 138 males; their mean age was 21.2. Data were analyzed by factor-analytic methods.

RESULTS

Factor analysis indicated there were 12 factors. Subjects scoring high on Factor I, liberal versus conservative attitudes, displayed liberal attitudes toward both sex and marihuana. Such individuals reported themselves as having more liberal sexual attitudes than the average person (-.508). They felt that sexual intercourse was all right for both young people and adults (-.837), and that anyone should have access to contraceptives (-.488). They had liberal attitudes toward homosexual relationships (-.291) and a positive regard for premarital intercourse (+.680). These liberal sex views were associated with liberal marihuana views; individuals high on this dynamic indicated a high use of marihuana (+.375) and a desire for liberalization of marihuana laws (+.368). At the other end of this dynamic was the more classical, puritanical ethic with regard to both sex and marihuana. On Factor V, experience-linked drug effects, persons who used marihuana (+.404) tended to feel that both marihuana (-.815) and alcohol (-.599) had beneficial effects upon sexual intercourse. They also felt that laws related to marihuana should be liberalized (+.362). Persons scoring high on Factor X, sexual revolution, had revolutionary attitudes about sex. They felt that the law had no place in regulating sexual practices between consenting adults (-.300); they also felt that women should feel free to initiate sexual activity (-.463). In regard to drugs, while they felt that alcohol decreased enjoyment (+.319), they felt that laws related to marihuana should be liberalized (+.372). On Factor XI, sex, it was found that males felt that alcohol decreased sexual enjoyment (+.596) while females felt the opposite (+.399). Women tended to use marihuana less than men (-.299).

CONCLUSIONS

The dynamics of sexual behavior and attitudes are varied and complex. Many of the factors appeared to be related to the changing role and moral considerations and practices of sex, at least in college populations. Marihuana also appeared to be an important component in the constellation of dynamics.

Cicero, Theodore J., et al. Function of the male sex organs in heroin and methadone users. New England Journal of Medicine, 292(17):882-887, April 1975.

DRUG	Heroin; Methadone
SAMPLE SIZE	88
SAMPLE TYPE	Methadone Patients; Addicts
AGE	Adults
SEX	Male
ETHNICITY	Black; White
GEOGRAPHICAL AREA	Missouri
METHODOLOGY	Experimental
DATA COLLECTION INSTRUMENT	Questionnaire; Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	23

PURPOSE

In previous studies by Cicero and colleagues, laboratory evidence showed that chronic morphine or methadone administration produced a pronounced reduction in the size and secretory activity of the male rat's secondary sex organs. An 87% reduction in serum testosterone levels was associated with this atrophy of the seminal vesicles, prostate, and epididymis. In view of these findings, long-term heroin or methadone use as an influence that may also impair secondary sex organ function in the human being was investigated.

METHODOLOGY

Three groups of male subjects were studied: 29 participants in a methadone maintenance program, 16 heroin addicts, and 43 narcotic-free controls. The function of the secondary sex organs was examined by determination of the volume of the ejaculate, and the concentration of fructose and citric acid in the ejaculate. Since fructose and citric acid are selectively secreted by the seminal vesicles and prostate, respectively, they can be used as chemical markers for their secretory activity. Testicular function was assessed by evaluation of sperm count, sperm motility, and secretion of testosterone. All subjects also filled out a questionnaire that covered medical, sexual, and drug use histories.

RESULTS

Methadone users averaged 9.1 years on both heroin and methadone (7.2 and 1.9, respectively), whereas heroin users had been using heroin for approximately 13 years. There were no statistically significant differences between the groups on the basis of race or age on any of the variables tested; therefore, all the data were pooled. Regarding their sexual history, the most common problem reported in controls was premature ejaculation, although even this was relatively rare. The methadone and heroin users reported substantial difficulties with many aspects of their sexual behavior function, particularly delayed ejaculation, impotence and failure to ejaculate; none of the controls reported such an occurrence. Also of import was the fact that all the heroin and 96.5% of the methadone users reported substantially less desire for sexual activity when they were taking narcotics than when they were drug-free. This was reflected in the reported monthly frequency of orgasms, with the controls averaging about 12 ejaculations per month, the methadone users 5, and the heroin addicts less than 3.

Based on the clinical examination of secondary sex organ function, the volume of the ejaculate in methadone users was approximately 50% less than that found in controls and, in addition, was nearly 40% lower than that recorded in heroin addicts. Regarding citric acid and fructose levels, the absolute amount of these compounds per ejaculate was substantially reduced in methadone users as compared to both the heroin and control groups; however, there was little difference between groups in the concentration of these substances. Amount of methadone dosage was not found to be related to any measure of secondary sex organ function.

Regarding testicular function, with two days of sexual abstinence, there was little difference between the three groups. However, at abstinence periods longer than three days, the sperm counts of methadone clients were significantly higher than control levels. Heroin users also had higher sperm counts than controls, but this difference was not statistically significant. Sperm motility was found to be substantially reduced below control levels in both the methadone and heroin groups. Serum testosterone levels were significantly reduced in methadone users as compared to both the heroin users and the controls.

CONCLUSIONS

The function of secondary sex organs is markedly suppressed in methadone maintenance users as compared to heroin addicts or drug-free controls. This effect appears to be the result of methadone use per se, rather than simply of total narcotic use, since the heroin addicts appeared to have only slightly impaired sex organ function. One possible explanation is that methadone, because of its slow clearance from the body, provides a fairly constant and rather high drug concentration throughout the day. In contrast, heroin users have fairly irregular drug levels in the body throughout the day. The possibility also exists, however, that methadone is simply a more potent drug than heroin in its effects on the secondary sex organs.

Cushman, Paul, Jr. Plasma testosterone levels in healthy male marijuana smokers. American Journal of Drug and Alcohol Abuse, 2(2):269-275, 1975.

DRUG	Marihuana
SAMPLE SIZE	38
SAMPLE TYPE	Students
AGE	Adults (18-40)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	24

PURPOSE

Some recent data (Kolodny et al., 1974) has suggested that chronic marihuana use may be associated with lower levels of plasma testosterone, an increase in the incidence of oligospermia, and a reduction in libido. On the other hand, other investigators have indicated no such change. Because of this inconsistency, an attempt was made to study the plasma testosterone levels in a group of young male marihuana-smoking university students and in a control group.

METHODOLOGY

The marihuana smokers consisted of 25 students from a New York City university whose mean age was 22 years. They gave histories of marihuana use for a mean of 2.8 years, and smoked an average of 5 "joints" weekly. All denied ever having used morphine, methadone, amphetamines, or barbiturates; six reported having used LSD, peyote, or mescaline. All gave histories of normal sexual function while under the influence of marihuana; however, three felt stimulatory sensations during foreplay while on the drug, and two others reported a decrease in libido when "stoned." All possessed normal secondary sex characteristics, and gynecomastia was not observed. The control group consisted of 13 males attending the same university, whose mean age was 25.6 years. All denied having used marihuana or any other dangerous drug. None reported any abnormalities in their libido, potency, or secondary sex characteristics.

Venous blood was obtained in heparinized tubes between 8:00 and 9:30 a.m., and the plasma immediately separated. Content of testosterone was estimated by radioimmunoassay; luteinizing hormone (LH) and follicle-stimulating hormone (FSH) content were measured by double antibody radioimmunoassay. Six other measurements of the same individuals' plasma testosterone at various intervals indicated that the day-to-day measurement fluctuated within a range of 100 ng/100 ml plasma.

RESULTS

All 25 marihuana smokers had plasma testosterone values within the range of normal, and their mean values were not different from those of the controls. The plasma LH and FSH levels in the marihuana smokers were within the normal range, and no individual value was below the lower limit of normal range. The possibility that the interval since the initiation of the last marihuana episode might be a significant episode variable in the plasma testosterone determinations was considered. The subjects reported smoking marihuana from 5 to 72 hours before the study, and no relation was found between plasma testosterone and the time since last reported use.

CONCLUSIONS

The present data indicate that all of a randomly selected group of healthy functioning university students have plasma testosterone levels within normal limits. This contrasts with the Kolodny study of plasma testosterone levels in which marihuana smokers reporting an average use of 10 or more joints per week had lower testosterone levels than those reporting the use of 5-9 joints per week. It appears that many casual marihuana smokers have normal plasma testosterone values although there may be some especially heavy smokers whose plasma testosterone levels are low in absolute terms.

Gay, George R.; Newmeyer, John A.; Elion, Richard A.; and Wieder, Steven. Drug/sex practice in the Haight-Ashbury or "the sensuous hippie." In: National Academy of Sciences. *Problems of Drug Dependence, 1975.* Proceedings of the 37th Annual Scientific Meeting, Committee on Problems of Drug Dependence. Washington, D.C.: the Academy, 1975. pp. 1080-1093.

DRUG	Multi-Drug
SAMPLE SIZE	95
SAMPLE TYPE	Treatment
AGE	Adults
SEX	59 Male; 36 Female
ETHNICITY	9 Black; 3 Asian; 76 White; 7 Spanish-Speaking
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	21

PURPOSE

Individual subjective experience in regard to the effects of a variety of drugs on sexual habits was examined. Specific areas assessed were agressiveness; increase or decrease in libido; pleasure derived; and general sexual experience, practice, beliefs, and attitudes.

METHODOLOGY

Subjects consisted of 95 clients at the Haight-Ashbury Heroin Detoxification Clinic or the Clinic's Medical Section. Interviews determined that forty-seven of the subjects were users, and 48 were nonusers, of heroin. In all, there were 59 men and 36 women. There were 76 whites, 9 blacks, 7 Latinos, and 3 Asians. Sixty-one of the subjects were between 21 and 29 years of age, 11 were 20 or younger, 12 were over 30, and 11 failed to report their age. All subjects filled out a questionnaire assessing their subjective experience in regard to the effects of a variety of drugs on sexual habits.

RESULTS

Marihuana usage was reported by nearly every subject (98%), with 81% claiming to have used it "at least three times in the past two months." The vast majority also reported having used psychedelics, with 60% reporting eleven or more "trips" in their lifetimes. About 20% reported having experience either with barbiturates or amphetamines. However, only a few reported daily use of either drug in their lifetimes. More than half the group claimed to have used cocaine at least once in the past two months.

Insofar as frequent, deliberate use of drugs to enhance sex was concerned, marihuana was most often cited. About two respondents in five claimed to use grass a few times a week or more in conjunction with sex. Seen to play a lesser role were alcohol, tobacco, cocaine, heroin, amphetamines, barbiturates, and methaqualone. About four-fifths of the use of barbiturates in conjunction with sex involved swallowing rather than injecting the drug. The preferred mode of administration of amphetamines in sexual situations was injection, with the oral route a near second. "Snorting" of cocaine was the preferred mode of use of that drug in conjunction with sex. Most heroin use in sexual situations involved the injection route; needle sharing between partners, often producing a psychopharmacologic orgasm, was reported by 50% of the subjects.

Cocaine was the most highly considered drug in regard to sexual functioning. After cocaine, the effects of mescaline, acid, and grass or hash were considered most "positive" in sexual functioning. The lowest ratings went to methaqualone, barbiturates, and heroin. Marihuana and hashish were regarded very much like LSD and mescaline. Only in regard to sexual fantasy did the psychedelics slightly exceed the cannabinoids, while only in regard to "ability to maintain an erection" did the cannabinoids exceed the psychedelics. Amyl nitrate and alcohol were considered relatively strong in promoting sexual desire and aggressiveness, but were relatively weak in controlling sexual functioning.

When asked, "If you could do any drug of your choice or have sex with anyone of your choice, which would you do?", three out of four respondents answered in favor of sexual contact. Of those who chose drugs, nearly all chose either heroin or cocaine. Half the subject group claimed they enjoyed sex more while straight; however, half the group reported the quality of their sex life had changed since they began using drugs--with nearly 3/4 of these reporting that the change was for the better. More than two out of five respondents said that the sexual contacts they had were related to drug-using situations on the majority of occasions. A similar proportion, however, reported that their sexual contacts were seldom related to drug use.

The cannabinoids, psychedelics, speed, cocaine, heroin, and alcohol were all mentioned by at least ten respondents each as drugs which "increased the aggressiveness of intercourse." In regard to "losing interest in sex," heroin was by far the most commonly cited drug, followed by speed, barbiturates, the psychedelics, and alcohol.

CONCLUSIONS

Cocaine, marihuana, certain psychedelics, amphetamines (in small dosages), heroin, and alcohol were noted to possess particular aphrodisiac qualities. These phenomena included an increase in libido, enhanced enjoyment of sex, and the lowering of inhibitions. Also, certain drugs were noted to decrease sexual activity. These included barbiturates, methaqualone, heroin, and large dosages of amphetamine or alcohol. It appears that there is now a young population very experienced and sophisticated in the areas of drugs and sex. The extraordinary high level of street experimentation which has taken place during the 1960's and 1970's is counterpoised to the paucity of scientific data available. It is hoped that the findings of the Haight-Ashbury population will contribute to some clarification of the ambiguities which so cloud this area of research.

Gossop, M.R.; Stern, R.; and Connell, P.H. Drug dependence and sexual dysfunction: A comparison of intravenous users of narcotics and oral users of amphetamines. British Journal of Psychiatry, 124:431-434, 1974.

DRUG	Opiates; Amphetamines
SAMPLE SIZE	54
SAMPLE TYPE	Hospital Patients
AGE	Adults (range 20-30)
SEX	27 Male; 27 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	London, Great Britain
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Observation
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	19

PURPOSE

Diminished sexual activity among individuals dependent upon opiate drugs has been noted by many investigators. Other researchers have investigated the effects of amphetamine upon sexual behavior and have suggested that diminished sexual activity may be one result of amphetamine dependence. A study was undertaken to compare the extent of sexual dysfunction, and the incidence of perverted behavior, among intravenous users of narcotics and oral users of amphetamines.

METHODOLOGY

The subjects were inpatients at the Bethlem Royal Hospital in London. Of the 54 patients, 30 were intravenous narcotics users and 24 were oral amphetamine users. There was an equal number of males and females; the mean age of the female narcotics users was 20.9; of the male narcotics users, 23.5; of the female amphetamine users, 24.3; and of the male amphetamine users, 28.5.

Details of the psychosexual histories of each patient were obtained from case notes. The presence of any of six items related to sexual dysfunction was noted for each subject: (1) menstrual periods absent beyond three months; (2) lack of sexual desire; (3) difficulty in attaining orgasm; (4) no pleasure from sexual activity; (5) no sexual intercourse or masturbation; and (6) disgust at the idea of sexual activity. In addition, the presence or absence of sexually perverted behavior was noted; this included flagellation, transvestism, and homosexuality.

RESULTS

The intravenous narcotics users showed a greater amount of sexual disturbance than the oral amphetamine users ($p<.001$). Females as a group were more disturbed than males ($p<.001$). Intravenous female and oral female users were not significantly different, but intravenous male users were found to be more sexually disturbed than oral male users ($p<.01$). No correlation could be found between the ages of subjects and sexual perversions, or between length of drug dependence and severity of sexual disturbance. In fact, although the male oral amphetamine users had been dependent upon drugs for the longest period of time (60.8 months), they presented no evidence of deficiencies in sexual function.

CONCLUSIONS

The findings indicate that intravenous narcotics users are more sexually disturbed than are oral amphetamine users. This may be a reflection of a greater personality disorder among the narcotics users; on the other hand, the greater sexual disturbance may be due to a specific physiological action of the drug. While it was beyond the scope of the study to offer an explanation of why females as a group showed greater disturbance than males, it is possible that drug dependence may be one manifestation of deviance among females. Disturbed female adolescents characteristically have sexual problems, and female offenders are often more psychiatrically disturbed than their male counterparts (Gibbens, 1971).

At the educational, public health, and clinical levels, emphasis should be placed upon the disturbing influences of narcotics on sexual functioning, and of amphetamines upon the sexual functioning of female users. In terms of treatment, it would seem clear that to treat such abnormalities of sexual functioning separately from drug dependence is contraindicated.

Mintz, Jim; O'Hare, Kate; O'Brien, Charles P.; and Goldschmidt, Jean. Sexual problems of heroin addicts. Archives of General Psychiatry, 31(5):700-703, November 1974.

DRUG	Heroin; Methadone
SAMPLE SIZE	136
SAMPLE TYPE	Methadone Patients; Addicts
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	May - September, 1972
NO. OF REFERENCES	6

PURPOSE

There is evidence that sexual problems may arise and become a substantial problem in the treatment of heroin addicts with methadone hydrochloride. However, there is a paucity of data on the sexual effects of methadone use. In order to determine the sexual functioning of heroin addicts and to evaluate the impact of various treatment regimens involving methadone on sexual problems, a group of addicts was surveyed.

METHODOLOGY

The study was conducted at the Drug Dependence Treatment Center of the Veterans Administration Hospital in Philadelphia. All subjects sampled were male veterans. Reports were obtained on 91 patients addicted to heroin at the point of application for outpatient treatment. Reports on the effects of methadone were obtained from 45 patients engaged in methadone treatment at the time of the study. Fifteen patients were sampled from each of three methadone treatment groups: (1) high-dose maintenance (more than 60 mg/day); (2) low-dose maintenance (between 20 and 40 mg/day); and (3) detoxification (steadily decreasing from 40 mg/day). All subjects contributed information on sexual adjustment, specifically on whether they had experienced impotence, premature ejaculation, or retarded ejaculation. They rated their experience on a four-point scale (1=always or almost always; 2=sometimes; 3=rarely; and 4=never) for each of three periods: (1) while taking methadone; (2) while using heroin; and (3) while not using drugs at all. The 91 heroin addicts only rated their experience for the last two time periods.

RESULTS

Differences in responses among the four groups of subjects were evaluated statistically by Chi-square tests. Since no significant differences among groups were found, statistics for the pooled sample were reported. When subjects were drug free, premature ejaculation occurred far more frequently than the other problems in all groups. Almost half of the patients (46%) reported that this problem occurred at least "sometimes"; fewer than one in five patients reported retarded ejaculation (20%) or impotence (16%) that frequently. Only one-third of the patients reported "never" experiencing premature ejaculation, while about two-thirds "never" experienced the other problems. A dramatic increase, on heroin, in incidences of impotence and retarded ejaculation was reported. Sixty-two percent reported experiencing retarded ejaculation at least "sometimes;" 43% reported experiencing impotence at least "sometimes." Accompanying these experiences was a decrease in premature ejaculation experiences when compared to the drug-free state (from 46% to 37%).

For all methadone patients, a comparison of methadone treatment and heroin-using periods was made. Treatment groups were pooled in both cases, as no significant differences were found. Methadone treatment was reported as better than heroin-using periods with regard to both impotence (42% vs. 18%) and retarded ejaculation problems (44% vs. 9%). No difference was observed regarding premature ejaculation. In comparisons of methadone treatment with the drug-free state, differences among methadone treatment groups did appear. The impact of methadone on premature ejaculation was most beneficial with high-dose maintenance and least beneficial for detoxifying patients, for whom performance on methadone was worse than in the drug-free state. The reverse was true for retarded ejaculation. Group differences in the impact of methadone on impotence problems were not significant. All groups said impotence was more frequent with methadone than when drug free.

CONCLUSIONS

Premature ejaculation while drug free emerged as a surprisingly frequent complaint in the patients. This problem was even more common on the methadone detoxification schedule. This is consistent with Cushman and Dole's (1973) suggestion that this symptom was a "constituent of the abstinence syndrome." If premature ejaculation is a withdrawal symptom, and retardation and impotence are problems of opiate dependence, it may well be that, in the important area of sexual life, some of the patients find themselves caught in a vicious cycle. Patients beginning drug use early in adolescence may never have experienced a satisfactory sexual adjustment. Difficulties in social adjustment and self-acceptance may result from, or at least be reinforced by, physiological consequences of drug abuse that are misinterpreted by the patient as personal failures or shortcomings. Regarding methadone maintenance, the data suggest that patients who expect sexual functioning while receiving treatment to be as trouble free as when drug free are likely to be disappointed. But when compared to sexual adjustment while using heroin, the impact of methadone maintenance appears to be a distinctly positive one.

Parr, Denis. Sexual aspects of drug abuse in narcotic addicts. British Journal of Addiction, 71:261-268, 1976.

DRUG	Heroin; Methadone; Multi-Drug
SAMPLE SIZE	25
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults; Adolescents (range 17-33)
SEX	14 Male; 11 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Brighton, England
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	13

PURPOSE

A group of narcotics using clients at the Brighton Drug Dependency Clinic in Brighton, England, were interviewed in order to obtain information on the effects of various drugs on their sexual functioning.

METHODOLOGY

A total of 14 male and 11 female clients of the clinic were included in the study. Their age range was 17-33. All patients were prescribed either heroin or methadone on a daily basis. Few were employed. Seven were married, and seven were married but separated. The predominant pattern in the group was of semistable heterosexual cohabitation. All had had sexual intercourse, the median age of first intercourse being 15 in both sexes. The subjects were interviewed to determine their sexual habits and their experience of the effects of various drugs on their sexual functioning.

RESULTS

Although five of the men acknowledged an interest in homosexuality, only two had had a homosexual experience since leaving school. Five of the 11 women had had some homosexual experience. However, for both men and women, most reported homosexual acts were of an occasional, experimental nature. Vigorous heterosexuality of outlook and practice was the rule. Four of the girls and three of the men had practiced group sex. Four of the women had difficulty in reaching orgasm and three of the men had minor potency disturbances apart from drugs.

The addicts were each asked the apparent effects of various drugs on their sexual functioning and on the functioning of partners of the other sex. Regarding heroin effects, depression of libido and performance was almost the rule in the males. Slowing of ejaculation was characteristic. Females reported diminution of sensitivity. Two of the females, however, reported that they felt more responsive on heroin because they were more relaxed. Regarding withdrawal, males did not stress sexual excitability but acknowledged it as incidental to severe abstinence. Several of the females had experienced sexual hypersensitivity as part of the withdrawal syndrome.

The effects of methadone, of which the patients had had more experience than of heroin, were deemed similar to, but less intense than, those of heroin. Methadone appeared to be more compatible with normal performance even when libido was suppressed. Reports on barbiturates were predominantly negative. Large doses were seen as socially and physiologically disorganizing. Males tended to report positively on amphetamines. It was purpurted to give very prolonged erections, and either delayed ejaculation or gave a capacity in both sexes for repeated orgasm. Females reported less favorably on amphetamines than did males.

The group's experience with cocaine was limited, but the drug was seen as socially stimulating and diverting, sometimes to the detriment of sexual initiative, though it could also facilitate orgasm. Sexual behavior under LSD was regarded as largely a matter of chance. During tripping, sexual thoughts were often irrelevant. When sex did seem appropriate to the ideation of the tripper, it could be intense or seem of great mystical value.

CONCLUSIONS

Heroin and methadone are powerful suppressants of male sexuality, but the effects are intermittent and reversible, and do not seem to motivate those who experience them to give up the drug habit. Enhanced sexuality is a potential reinforcer of drug use, but appears to be regarded more as a fringe benefit, just as potency disorders are tolerated as incidental side effects.

Ungerer, James C.; Harford, Robert J.; Brown, Frank L., Jr.; and Kleber, Herbert D. Sex guilt and preferences for illegal drugs among drug abusers. Journal of Clinical Psychology, 32(4): 891-895, 1976.

DRUG	Cocaine; Amphetamines; Barbiturates; Heroin
SAMPLE SIZE	70
SAMPLE TYPE	Treatment
AGE	Adults (mean 22.5)
SEX	53 Male; 17 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Connecticut
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Questionnaire; Mosher Forced-Choice Sex Guilt Subscale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	25

PURPOSE

Some observers have suggested that drug preferences may be related to personality characteristics such as anxiety. Savitt (1963) proposed that anxious or guilty individuals may prefer sedatives rather than stimulants because they relieve the anxiety or reduce the frequency of libidinal and aggressive impulses that arouse anxiety. An investigation was undertaken to compare punishment expectancies of drug abusers who either preferred sedatives or had no particular preference for sedatives. Because recent research has indicated that sexuality may be a special problem for some drug abusers, the Mosher Forced-Choice Sex Guilt Subscale was used.

METHODOLOGY

Subjects included 53 male and 17 female clients of three drug-free treatment programs at the Drug Dependence Unit of the Connecticut Mental Health Center. The mean ages of the males and females were 23.2 years and 21.8 years, respectively. All subjects filled out the Mosher instrument, as well as a drug-use history questionnaire. The drugs studied were amphetamines, cocaine, barbiturates, and heroin. Based on the responses, three drug-preference groups were established: the Sedative group, the Stimulant group, and a Mixed group (those preferring both stimulants and barbiturates).

RESULTS

Thirty-one clients preferred only sedatives (Sedative group); 22 (Mixed group) preferred one stimulant and one barbiturate; and the remaining 17 preferred stimulants only (Stimulant group). A one-way analysis of variance of the sex guilt scores showed significant differences among the three groups ($p<.001$). Persons in the Sedative group had a significantly higher mean sex guilt score than did clients in the Stimulant group ($p<.001$) and the Mixed group ($p<.01$). The mean sex guilt score for the Stimulant group did not differ significantly from that of the Mixed group. Sex and age-related differences in sex guilt were not statistically significant.

CONCLUSIONS

Drug users who prefer sedatives have high sex guilt scores and therefore associate significantly more self-mediated punishment with sex than drug abusers who either express a mixed stimulant-sedative preference or a preference for stimulants. The data suggest that generalized punishment expectancies may contribute to an understanding of drug preferences. In addition, the results support the validity of Mosher's sex guilt construct. According to Mosher, individuals who are higher in sex guilt are more likely to adopt behaviors that result in the avoidance of sex in order to reduce their expectancies for self-mediated punishment.

Pregnancy

Blinick, George; Wallach, Robert C.; Jerez, Eulogio; and Ackerman, Bruce. Drug addiction in pregnancy and the neonate. American Journal of Obstetrics and Gynecology, 125(2):135-142, May 15, 1976.

PURPOSE

Drug addiction during pregnancy has been cured in two ways: through detoxification programs and methadone maintenance programs. This study reviews the literature and describes the experience at the Bernstein Institute of Beth Israel Medical Center in New York City, the largest voluntary hospital for the treatment of drug abuse in the city and one which uses these two distinct treatments for the heroin addict.

SUMMARY

Opiate addiction in pregnant women is a medically treatable complication of pregnancy. In general, treatment results are satisfactory if the patient and her infant receive competent medical therapy. The most serious problem in early pregnancy is hepatitis; early spontaneous abortion in association with hepatitis is one prognosis for the mother. Within programs of detoxification and maintenance, cases of late hepatitis with jaundice have been successfully treated with no maternal deaths.

The methadone detoxification program, aimed at relieving withdrawal symptoms, is best carried out in a hospital setting. Upon admission to the detoxification program, the addict is given a dose of methadone according to the size of habit. Twenty mg of methadone is given orally, dissolved in fruit juice or an orange-flavored drink. If withdrawal symptoms indicate the need for more methadone, it is administered orally in 5 mg increments. Over the next 5 to 10 days the dosage is gradually reduced until no medication is given. After detoxification, rehabilitative services and counseling should be offered. Since almost all addicts return to drugs following detoxification, frequent readmissions for detoxification during pregnancy can occur. Experience has shown that mothers who abuse heroin without other drugs may be given detoxification treatment on methadone maintenance during the last trimester without poor results, except a greater risk of withdrawal symptoms in the newborn infant. The most serious complication found in the detoxification program for the mother is severe malnutrition. When the pregnant addict goes into labor she is treated, in general, as any other patient. The dangers to the infant are prematurity, increased percentage of breech deliveries, and the withdrawal syndrome.

The methadone maintenance treatment program is aimed at the voluntary rehabilitation of hard-core drug addicts who are motivated to escape the "kick" of heroin and its resulting lifestyle. The patient is given increasing doses of methadone to induce a state of tolerance. When 120 mg is reached, the daily dose is held constant while the distribution is shifted to a single dose. The complications of pregnancy are similar to those in the average obstetric population. Again, labor continues as usual. The withdrawal syndrome in infants has provoked considerable debate; it is commonly stated that methadone is good for the pregnant mother but bad for the baby.

The problem of the way in which multiple drug abuse affects the fetoplacental unit is poorly understood. In the babies seen in the present study, the classical syndrome related to alcoholism was not definitely seen. The treatment of polydrug abuse requires hospitalization, preferably in a separate ward. During detoxification from alcohol or barbiturates, or both, methadone is continued at its usual levels. It is apparent that methadone, barbiturates, tranquilizers, occasional heroin, and alcohol are common components of drug abuse. Other drugs used therapeutically can cause severe withdrawal symptoms in babies.

There is usually a reduction of birth weight in infants born to drug-using mothers. Recently it has been suggested that regular prenatal visits and low-dose methadone may lessen the incidence of low birth weight. It is generally accepted that intrauterine growth retardation (IUGR) is the cause of reduced birth weight, although Naeye et al. (1973) suggested that some tendency toward premature birth may also be present. It is probable that narcotic drugs directly affect fetal growth, although infection, malnutrition, or other socioeconomic factors and the use of other drugs in combination with narcotics may also play a role. Naeye et al. (1973) stated, after postmortem studies, that IUGR is due to a reduced cell number. If this is valid for surviving infants as well, IUGR may be an adverse prognostic sign in terms of ultimate development. Neither Reddy et al. (1971) nor Zelson et al. (1971) found an increased number of congenital malformations in infants born to heroin-using mothers. Observations also show that methadone has no teratogenic effect on the fetus. Signs of a withdrawal syndrome occur in many infants born to mothers addicted to narcotic drugs. For infants born to heroin-addicted mothers, withdrawal syndrome incidences of 55%, 85%, and 67% have been reported by Perlmutter (1967), Reddy et al. (1971), and Zelson et al. (1971), respectively. For infants born to mothers receiving methadone, an incidence of withdrawal of 94% was reported by Harper et al. (1974), compared to 58% according to Blinick et al. (1969). With heroin, withdrawal signs are usually apparent within 24 hours and always within 72 hours. With methadone, the onset rarely occurs on the first day, most often occurring on the third or fourth day. If the infant is discharged early, this type of withdrawal may appear later, and may be severe or fatal. Furthermore, infants experiencing withdrawal feed poorly and have markedly increased muscle tone, frequent tremors, marked irritability, and a high-pitched cry. Vomiting, diarrhea, sneezing and sweating, convulsions, and severe hyperthermia may also occur. A severe withdrawal syndrome may also occur with use of cocaine or other drugs by the mother. Diazepam appears to be the drug of choice for treating withdrawal. A general policy is followed of hospitalizing, for at least 14 days, infants born to mothers on methadone maintenance. A shorter hospitalization period may be acceptable for infants of heroin-addicted mothers. However, ambulatory follow-up of all patients is carried out after discharge. Of major importance regarding prognosis for the infants is that too little information is available as yet. There have been reports of a high incidence of minimal cerebral dysfunction in the long-term follow-up of infants with IUGR; many infants have had a recurrence of agitation, tremors, hypertonicity, and disturbed sleep; and there have been instances of sudden unexpected death. However, there have also been follow-ups showing both weight gain and evaluation to be normal.

CONCLUSIONS

It is most important to emphasize that it is not known whether the withdrawal syndrome in itself does irreversible damage to an infant, or whether treatment of the syndrome will prevent irreversible damage. An adequate long-term follow-up study of the development of these infants would have to take account of the effects of the narcotic drugs and therapeutic approach used, as well as the interrelated nutritional, infectious, and socioeconomic factors which may affect development, both prenatally and postnatally.

Davis, Miryam. The quality of prenatal treatment of narcotic addicted women as a factor in neonatal outcome. In: National Institute on Drug Abuse. Addicted Families and Their Children. A Services Research Report. Washington, D.C.: Government Printing Office, 1977. pp. 48-58.

DRUG	Methadone
SAMPLE SIZE	37
SAMPLE TYPE	Methadone-Treated Women
AGE	Adults (mean 25); Neonates
SEX	Not Specified
ETHNICITY	91% Black; 9% White
GEOGRAPHICAL AREA	Washington, D.C.
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	1974 - 1976
NO. OF REFERENCES	14

PURPOSE

It is well known that infants of narcotics-addicted mothers experience a syndrome of neonatal withdrawal--a direct, pharmacodynamic effect of in utero exposure to narcotic drugs. A study was conducted in order to test the hypothesis that the quality of medical management and comprehensive treatment services provided to the pregnant heroin addict is a critical factor affecting pregnancy outcome, in terms of both offspring survival and spectrum of morbidity in the resulting infant.

METHODOLOGY

Two groups of heroin addict mothers, maintained on methadone through the Narcotics Treatment Administration (NTA) in Washington, D.C., were included in the study. Group A consisted of 22 women who received special treatment at the Perinatal Treatment Program (PTP) of the NTA. The clinic facility was located in a site far from the city's drug traffic areas, and the staff/patient ratio was 1/10-12. These women gave birth between July 1, 1974, and June 30, 1975. Group B consisted of 15 women who received the same treatment, but the treatment was transferred to a narcotics treatment clinic in the midst of a heavy drug-traffic street corridor, and the staff/patient ratio was 1/20-25. Children were born to these women between September 1, 1975, and March 30, 1976. There were no differences between the two groups of women in their: age at delivery, race, or educational level. The mothers' mean age at delivery was 26.6 and 25.3 years in the Clinic A and Clinic B groups, respectively. Both groups were predominantly black and averaged approximately 10 years of formal education.

Infants were examined and the following variables assessed: birth weight, gestational age, withdrawal syndrome symptoms, Apgar score, and length of infant's hospitalization.

RESULTS

The most significant finding distinguishing the two groups was that 20% of Clinic B pregnancies resulted in either a stillbirth or neonatal death; these outcomes were not observed among Clinic A patients. Another striking finding was that 60% of Clinic B patients regularly and frequently supplemented their methadone dosage with illicit heroin abuse throughout pregnancy. Another 20% of Clinic B mothers began frequent heroin abuse during the latter stages of pregnancy. Almost 48% of the Clinic A mothers were found to have abused illicit narcotics, compared to approximately 87% of the Clinic B mothers. This difference was statistically significant ($p<.01$). The lack of psychosocial supportive services in the Clinic B setting, with the concomitant increase in maternal heroin and polydrug abuse, appeared to increase the level of medical risk to the survival of the fetus and infant.

Among liveborn, surviving infants, Clinic B newborns were hospitalized longer than Clinic A newborns (33 days versus 21 days, on the average). In addition, nearly twice as many Clinic B infants (54.5%) as Clinic A infants (28.6%) required pharmacological treatment for symptoms. A trend was also revealed for Clinic B infants to have lower Apgar scores at 1 and 5 minutes of life than those of Clinic A infants, but this difference was not significant.

CONCLUSIONS

Transfer of the methadone Perinatal Program from a separate, well-staffed clinic to a larger facility located in a heavy drug-traffic, inner-city area, with reduced psychosocial supportive services, resulted in greatly increased maternal abuse of heroin and other psychoactive drugs. The greater neonatal morbidity among Clinic B patients is consistent with previous clinical observation that complications tend to be more severe in those infants of addicted patients with greatest prenatal illicit drug abuse.

It is proposed that pregnant addicts, while the smallest fraction of any narcotic treatment program, are at such high-risk prenatally and postpartum that their care should require a centralized facility with skilled staff, and available and mandatory obstetrical and pediatric services.

Finnegan, Loretta P.; Reeser, Dian S.; and Connaughton, James F., Jr. The effects of maternal drug dependence on neonatal mortality. Drug and Alcohol Dependence, 2:131-140, 1977.

DRUG	Heroin; Methadone
SAMPLE SIZE	1,864
SAMPLE TYPE	Infants of Drug-Dependent Women; Controls
AGE	Neonate
SEX	Both Sexes
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	1969 - 1974
NO. OF REFERENCES	3

PURPOSE

In recent years there has been an increase in the number of pregnant drug-dependent women who present themselves to hospitals. However, they generally do not seek medical assistance until the onset of labor. Consequently, addiction in pregnancy has become an important health problem owing to medical complications among the pregnant women and the extremely high rate of prematurity and other negative effects in their infants. An examination was made of 278 infants born to drug-dependent women in order to discover the incidence of low birth weight, neonatal mortality, and pathological findings.

METHODOLOGY

The data were tabulated from 278 infants born to drug-dependent mothers at the Philadelphia General Hospital between 1969 and 1974. The infants were categorized into three groups: Group A (N=63) included infants of mothers whose primary drug of dependence was heroin, who had no prenatal care, and who were admitted only for delivery; Group B (N=80) included infants of women who had minimal prenatal care (average of 1.8 visits) and were maintained on a low-dose methadone maintenance program; Group C (N=135) included infants of women who had an average of 9.2 prenatal visits and were maintained on a low-dose methadone maintenance program. A control group of 1,586 control infants were chosen from the general population at the hospital. The mothers of the control infants received the same prenatal care services as the drug-dependent mothers; the infants also received the same nursery services as the infants of the drug-dependent women. Data were collected on the incidence of overall low birth weight, mortality, and the causes of mortality.

RESULTS

Eighty-six of the 278 infants had low birth weight (30.9%). On separating the drug-dependent population into Groups A, B, and C, there were 30, 31, and 25 low birth-weight infants, respectively, an incidence of 47.6%, 38.8%, and 18.5%. There were 241 low birth weights among the control infants (15.2%). The total number of deaths among the 278 infants equaled 15 (5.4%). In Groups A, B, and C, there were 3, 8, and 4 deaths, respectively, an incidence of 4.8%, 10%, and 3%. There were a total of 26 deaths among the control infants, an incidence of 1.6%. The incidence of death in infants of low birth weight in Groups A, B, and C was 10%, 25.8%, and 4%, respectively. In the controls, the incidence was 10%. The incidence of overall mortality in the three addicted groups was three times that of the general population. The most striking rate was in Group B, where both overall mortality and low birth weight mortality was affected, suggesting that methadone given in an uncontrolled manner may be more dangerous than illicit heroin. In contrast, the mothers maintained on methadone who had adequate prenatal care had a somewhat increased overall mortality rate but a decreased mortality rate in the low birth-weight infants in comparison with the control group.

In Groups A and B, the infants generally died from the effects of prematurity, including hyaline membrane disease, asphyxia neonatorum, intracranial hemorrhage, pulmonary hemorrhage, pneumothorax, and pneumonia. In Group C, 1 infant died subsequent to attempts at surgical repair of a congenital anomaly (gastroschisis). Another infant was born prematurely to a mother who had severe Rh hemolytic disease; the infant had hydrops fetalis and hyaline membrane disease. Two other infants succumbed to meconium aspiration and subarachnoid hemorrhage.

CONCLUSIONS

There is an extremely high incidence of low birth weight and markedly increased mortality rate in the drug-dependent population. The causes of mortality can be ascribed to the overall lack of health care which the pregnant drug-dependent woman undergoes, which produces a subsequent onset of premature labor, resulting in the birth of a low birth-weight infant.

Kandall, Stephen R., et al. Differential effects of maternal heroin and methadone use on birthweight. Pediatrics, 58(5):681-685, 1976.

DRUG	Methadone; Heroin
SAMPLE SIZE	337
SAMPLE TYPE	Infants of Narcotic-using Women; Controls
AGE	Neonate
SEX	Not Specified
ETHNICITY	White; Black; Puerto Rican
GEOGRAPHICAL AREA	Bronx, New York
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Program/Clinic Statistics
DATE(S) CONDUCTED	1971-1975
NO. OF REFERENCES	27

PURPOSE

While an initial report by Rajegowda (1972) claimed that birth weights of infants born to mothers taking methadone during pregnancy were not different from those using heroin, later reports have suggested that methadone usage during pregnancy is associated with higher birth weights. A systematic review of births at hospitals in the Bronx, New York, area was undertaken to determine birth-weight patterns of infants born to populations of women with varying drug histories. The relationship of methadone dosage to birth weight was also examined.

METHODOLOGY

Review of all births at the Bronx Municipal Hospital Center from January 1, 1971, to December 31, 1975, was undertaken to identify all infants born to mothers with histories of past or present narcotic usage. A total of 252 infants were identified. Nineteen additional patients, born at other hospitals to mothers enrolled in the Albert Einstein College of Medicine-Bronx State Hospital Methadone Maintenance Treatment Program (MMTP) during the entire pregnancy, were included in the study. In addition, a group of 66 infants served as a control group. The infants were divided into six groups: (1) 66 neonates born to mothers who admitted to heroin abuse during pregnancy and denied concomitant use of other narcotic agents; (2) 35 infants born to mothers with a documented past history of heroin abuse, but who claimed to be drug-free during pregnancy; (3) 62 infants of mothers who admitted to use of both heroin and methadone in large amounts during pregnancy; (4) 108 infants born to mothers who had taken methadone as their sole or major drug throughout the pregnancy; (5) 40 infants born to mothers who were registered in the MMTP throughout pregnancy; and (6) 66 neonates born to mothers with no history of narcotic usage (controls).

RESULTS

Newborns in Group 1 had a mean birth weight of 2,490 gm; those in Group 2, 2,615 gm; and in Group 3, 2,535 gm. There were no statistically significant differences in either birth weight or gestational age among the three groups. Mean birth weight of Group 4 was 2,961 gm; when compared to the combined weights of Groups 1, 2, and 3, the difference was significant (p<.001). Infants in Group 4 also tended to have a greater mean gestational age, but this difference was not statistically significant. Infants in the control group (Group 6) had significantly higher birth weights (p<.01) and gestational ages (p<.05) than infants in the methadone group (Group 4). There were no differences between the two methadone groups. Methadone dosages were available for the mothers in the MMTP program, and maternal methadone dosage and birth weight was found to be highly significant (p<.005), particularly for the first trimester where the higher the dosage, the higher the birth weight (p<.01). However, this relationship between birth weight and either second or third trimester was not significant.

Comparing Groups 1 through 4, lack of prenatal care was associated with a reduction in birth weight in all drug groups (p<.01). Birth weights were higher, however, in the methadone group independent of prenatal care (p<.01). White mothers gave birth to significantly heavier babies (mean 3,147 gm) than black (2,510 gm) or Puerto Rican mothers (2,638 gm) (p<.001). Within nonwhite groups, babies born to mothers taking methadone were heavier than those in the other drug groups (p<.025). There was no such difference among the white groups.

CONCLUSIONS

This study confirms the observation that babies born to mothers abusing heroin tend to be of low birth weight. Birth weights in Group 2 (former heroin users) were almost identical to those in Group 1 (heroin users). Characteristics of this group were similar to those of Group 1 in terms of race, maternal age, and prenatal care. Thus, the observed similarity in birth weight suggests that heroin abuse in the past, despite abstinence during the current pregnancy, may still contribute to fetal growth retardation. The higher birth weights in the methadone group support the most recent studies in the literature. Although prenatal care and race were significant factors influencing birth weight, methadone had a direct effect on fetal growth.

Kron, Reuben E.; Kaplan, Stuart L.; Finnegan, Loretta P.; Litt, Mitchell; and Phoenix, Marianne. The assessment of behavioral change in infants undergoing narcotic withdrawal: Comparative data from clinical and objective methods. Addictive Diseases, 2(2):257-275, 1975.

DRUG	Methadone
SAMPLE SIZE	Not Specified
SAMPLE TYPE	Infants of Methadone-treated Women
AGE	Neonate
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Brazelton Neonatal Assessment Scale
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	18

PURPOSE

Increasing usage of illicit drugs by inner-city populations during the late 1960's and early 1970's has increased to near-epidemic proportions the number of infants delivered at city hospitals who must undergo the rigors of narcotic withdrawal within the very first days of life. Unless the newborn infant of the addict is managed properly, it may suffer formidable morbidity. Failure to make a timely diagnosis of the withdrawal syndrome may jeopardize the life of the infant. It has long been recognized that the characteristics of behavior reflect the activity of the central nervous system (CNS); however, there are few precise clinical methods applicable to the newborn. In the past decade, a number of approaches have been reported as useful in detecting and measuring changes in CNS functioning. It was the purpose of this study to refine these techniques and to develop means to better monitor the withdrawal syndrome and its therapy.

METHODOLOGY

Three procedures were used to investigate neonatal withdrawal syndrome. (1) A neonatal behavioral scale developed by Brazelton (1972) measured behaviors thought to reflect the status of the infant's CNS. The infant's responses to a variety of graded perturbations and interventions were rated on a scale from 1 to 9. (2) Nutritive sucking patterns were investigated by monitoring sucking rates, pressures, and amounts of nutrient consumed per unit time. (3) A clinical scoring system developed by Finnegan et al. (1974) was utilized to rate the severity of narcotic withdrawal and to regulate drug-dosage levels during therapy. The total symptom score earned by the infant determined the medication-dosage level.

The three approaches were applied concurrently to study the behavior of passively addicted infants in comparison to various control groups. The infants of the addicted mothers were admitted to the high-risk nursery at Philadelphia General Hospital. The majority of the mothers had been attending methadone maintenance clinics; a smaller number were street addicts. Generally, only infants born to methadone clients were included in the experimental group, in order to minimize confounding with the unknown drug effects prevalent among free-living addicts. Control infants were also drawn from the high-risk nursery and matched for the same social and racial background as the passively addicted infants.

RESULTS

Studies performed to compare the sucking behavior of two groups of infants undergoing narcotic withdrawal, using either the clinical scoring system or routine clinical methods, showed that there was an improvement in the sucking behavior of barbiturate-treated infants whose dosage was prescribed under the scoring system. However, under either method, infants treated with paregoric evidenced better sucking performance than those treated with barbiturates. Imprecision in prescribing dosage levels, likely to occur when standard clinical approaches are used, tends to be more troublesome with barbiturates. Sucking performance of the experimental group was inversely correlated with the length of time the mothers had been attending the methadone clinic, and with the maternal methadone dosage. Infants born to addicts who entered the methadone program shortly before delivery had significantly higher sucking rates than infants of those who were on methadone for a long period of time.

In another test, the infant's sucking performance was compared to behavior assessed by the Brazelton neonatal scale. The Brazelton and sucking data were statistically analyzed to test for significant differences between the experimental (methadone) and control groups. On the Brazelton, each of 5 items that measured irritability revealed significant differences between the experimental and control groups ($p<.001$). Items that dealt with motor behavior also separated the two groups ($p<.05$); however, items measuring alertness did not differentiate the infants born to addicts from controls. Three motor items and three alertness items showed significant correlations between sucking measures and Brazelton findings. When the alertness and motor items were combined, the correlation between Brazelton and sucking was very high ($p<.005$).

CONCLUSIONS

The definitive medical management of the neonatal narcotic withdrawal syndrome has yet to be described. Standard clinical methods for evaluating the infant undergoing withdrawal tend to be insensitive to nuances in neonatal behavior that reflect important changes in CNS functioning. Fine-grained clinical and objective methods of assessing the adaptive behavior of the infant, such as the Brazelton neonatal scales, the clinical scoring system, and objective measures of sucking behavior, may help to better define the optimal pharmacologic treatment for the abstinence syndrome.

Oleske, James M. Experiences with 118 infants born to narcotic-using mothers. Clinical Pediatrics, 16(5):418-423, 1977.

DRUG	Methadone; Heroin
SAMPLE SIZE	118
SAMPLE TYPE	Infants of Narcotics-using Women
AGE	Neonate
SEX	53 Male; 65 Female
ETHNICITY	114 Black; 4 Puerto Rican
GEOGRAPHICAL AREA	Newark, New Jersey
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Program/Clinic Statistics
DATE(S) CONDUCTED	1971 - 1973
NO. OF REFERENCES	31

PURPOSE

The experiences of all infants born to narcotic-using mothers at the New Jersey Medical School during the years 1971-1973 were investigated by examination of newborn records. The investigation studied the deleterious effects of maternal addiction on the infant both before and after birth, including the alteration in calcium metabolism that may help to explain some of the physiologic alterations seen during withdrawal.

METHODOLOGY

The charts of 118 infants born to 108 narcotic-using mothers from 1971 through 1973 were reviewed. Data collected included birth weights, head circumference, length of hospital stay, estimated gestational age, maternal drug history and obstetric record, clinical condition of the infant, one-minute Apgar score, serum-ionized calcium levels, and discharge disposition. Of the 188 infants, 114 were black and 4 were Puerto Rican; 65 were female and 53 were male. The average maternal age was 23.6. Sixty-three mothers had attended a prenatal clinic, and 55 had not seen a doctor before delivery. Of the mothers, 100 had used heroin; 18 used methadone, 8 of whom were in a methadone maintenance program. The group of 118 infants was compared to a control group consisting of all infants (2,752) born in 1972.

RESULTS

The birth weights and head circumferences for all term infants and term small-for-date infants, when compared with controls, were lower. There was no difference in the birth weights of term infants of heroin versus methadone-using mothers (2,765 gm versus 2,736 gm). Surprisingly, absence or presence of prenatal care was not significantly related to birth weight.

The study infants had a significant increase in all complications during the neonatal period when compared with the control group. The perinatal mortality rate for the study group was 3.4%, compared with 2.3% for the controls. The narcotic users had almost 5 times as many small-for-date babies and 3 times as many prematures. The narcotic-using group had more in utero hypoxia and stress states, and a similar and potential disabling complication in 4 infants was seizure disorder. The study infants had 5-fold more complications than did the control group. Most of the study infants had symptoms of withdrawal; 54% were severe enough to require treatment with chlorpromazine.

Of the term infants in the study group, 54 had a serum-ionized calcium level test done during the first 24 hours. Of these, 33 had withdrawal symptoms severe enough to require drug therapy. The difference in ionized calcium level between these two groups of infants (2.07 vs. 2.17 mEg/1) was not significant, though those with the more severe withdrawal symptoms had lower ionized calcium levels. When compared with the normal controls, all these patients had a significantly lower ionized calcium ($p<.01$).

CONCLUSIONS

The large number of premature and in utero growth-retarded infants, and the higher morbidity and mortality of these infants indicates that infants of narcotic-using mothers are at high risk and need special attention and care. The advantages of methadone have not been demonstrated for infants born to mothers using illicit methadone or registered in methadone programs. Until the long-term hazards of methadone on the fetus are known and the results of heavy use of alcohol by those enrolled in methadone maintenance programs are better delineated, mothers who want to have children and are now fertile because of methadone, should be encouraged to become "drug-free" (including alcohol) before and during pregnancy.

Ostrea, Enrique M., Jr.; Chavez, Cleofe J.; and Strauss, Milton E. A study of factors that influence the severity of neonatal narcotic withdrawal. Addictive Diseases, 2(1):187-199, 1975.

DRUG	Opiates
SAMPLE SIZE	198
SAMPLE TYPE	Infants of Addicted Mothers
AGE	Neonate
SEX	107 Male; 91 Female
ETHNICITY	184 Black; 13 White
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Observation
DATE(S) CONDUCTED	1972 - 1973
NO. OF REFERENCES	11

PURPOSE

Many of the studies attempting to delineate factors influencing the severity of neonatal narcotic withdrawal have been retrospective in nature; different or contradictory conclusions have been reached because of inadequate controls; and too much reliance has been placed on maternal history in correlating the drug habit to the severity of neonate withdrawal. In order to get more accurate information, a prospective study of addicted mothers was performed at a Detroit hospital.

METHODOLOGY

A total of 198 mothers and their infants were included in the study which was conducted between December 1972 and December 1973. About 70% of addicted mothers delivering at the Detroit hospital had also attended a maternity methadone clinic. By using the clinic records and a quantitative measurement of drug levels in the urine and serum of the mother and her infant at birth, a more objective means of ascertaining the possible maternal, neonatal, and environmental factors which may affect the severity of neonatal withdrawal was possible. Any infant likely to develop neonatal problems other than those clearly due to narcotic withdrawal was excluded from the study. In order to determine severity of withdrawal, a scoring system was devised. Essentially, major signs and symptoms of narcotic withdrawal--such as vomiting, diarrhea, weight loss, irritability, tremors or twitching, and tachypnea--were assessed either as mild, moderate, or severe. Each infant was observed three times daily for a minimum of 5 days. The severity of withdrawal was always decided by the same individual.

RESULTS

Based on data for 95 infants, the withdrawal rating indicated that 67% of the infants had mild withdrawal, 27% had moderate withdrawal, and 6% had severe withdrawal. Infant factors such as gestational age, 1- and 5-minute Apgar, sex, and race did not correlate with withdrawal severity. Among maternal factors, maternal age, parity, duration of heroin addiction and duration of methadone intake were also not significantly different in those whose babies developed mild or moderate-to-severe symptoms. Severity of withdrawal did not correlate with the total morphine level measured either in the infant's or mother's urine or in cord blood. Serum levels of calcium and glucose were normal and identical in both mild and severe withdrawal. Several factors, however, did correlate significantly to the severity of neonatal narcotic withdrawal. Foremost of these was the methadone dose of the mother. A statistically higher incidence of moderate to severe withdrawal was seen in babies whose mothers were on more than 20 mg of methadone per day ($p<.01$). In addition, infants whose mothers were on a high methadone dose of 20 mg or more per day had a greater postnatal weight loss despite a significantly higher birth weight initially, and stayed in the hospital longer.

In order to determine the effect of nursery environment on severity of withdrawal, the infants were randomly assigned to either a regular or study nursery. The study nursery was a secluded, quiet, and dimly lighted room. The infants were bundled and placed in nonmotorized incubators, and were fed every three hours. The control infants in the regular nursery were bundled in open bassinets and exposed to the usual nursery noise and illumination, and were fed every 4 hours. The incidence of mild, moderate, or severe withdrawal was not significantly different in the control versus the study group ($p<.50$). Despite more frequent feedings in the experimental group, the weight loss was essentially identical in both groups.

Ramer, Cyril M., and Lodge, Ann. Neonatal addiction: A two-year study. Part I: Clinical and developmental characteristics of infants of mothers on methadone maintenance. Addictive Diseases, 2(2):227-234, 1975.

DRUG	Methadone
SAMPLE SIZE	35
SAMPLE TYPE	Infants of Methadone-treated Women
AGE	Neonate
SEX	9 Male; 26 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Psychological Tests
DATE(S) CONDUCTED	1972 - 1974
NO. OF REFERENCES	4

PURPOSE

Insufficient clinical experience exists regarding the management of the pregnant heroin addict who enters a methadone maintenance treatment program or the female who conceives and delivers while consuming methadone. A two-year longitudinal study was conducted of the neonatal course and early growth and development of 35 infants born to addicted mothers maintained on methadone.

METHODOLOGY

Between April 1972 and September 1974, 35 infants were born to 32 mothers registered at the San Francisco Methadone Maintenance Treatment Program. The infants were examined and treated in the Intensive Care Nursery at Children's Hospital. The infants were assessed daily during their hospitalization for presence and severity of withdrawal signs and symptoms, and daily urine samples were collected for presence of narcotic metabolites. A follow-up of infants was conducted, using developmental tests such as the Brazelton Neonatal Behavioral Assessment Scale and the Bayley Scales of Infant Mental and Motor Development.

RESULTS

Of the 35 infants, 34 were born at or near term and one at 36 weeks' gestation. One infant expired at 12 hours of age from severe bilateral aspiration pneumonia. The mother had been stabilized on 5 mgm of methadone for several months. There were no congenital abnormalities in any infant except for bilateral rudimentary extra digits on one infant. Apgar scores were at least 8 and 9 except for one transiently depressed infant and the infant who expired.

The average birth weight for all single births was 3,015 gm. However, those whose mothers were heroin addicts at the time of conception and later entered the methadone program weighed significantly less (p<.01) than those born to mothers who were enrolled and stabilized on methadone when they conceived. The average birth weight of the first group of mothers was 2,775 gm; of the second group, 3,240 gm.

Of the 34 surviving infants, 11 (32%) showed no symptoms of withdrawal during the entire hospital course. Nine infants (27%) showed mild symptoms of withdrawal, including minimal irritability, minimal regurgitation, and being comfortable when swaddled. Ten infants (29%) showed moderate signs of withdrawal, including irritability and being tremulous without stimulation, accompanied by a high-pitched cry for periods of several hours. Only four infants (12%) showed severe symptoms, including high irritability, tremulousness, constant crying, regurgitation of most feedings, and the need for sedative medication. Three of the latter infants developed transient seizures. Daily urine specimens were obtained from 31 of the infants and tested for narcotic metabolites. Twenty infants (65%) demonstrated urines positive for methadone at least once. Fifteen infants had methadone present in urine for 2 days; 7 for 3 days; and 3 for 4 days. Six infants also demonstrated morphine in their urines. All infants whose mothers were on less than 20 mgm of methadone demonstrated mild or no symptoms, while those whose mothers were on 20 to 40 mgm daily had moderate, mild or no symptoms. Six infants with the most severe symptoms showed morphine as well as methadone in their urine.

Length of hospitalization ranged from 3 to 26 days, with an average of 6 days. Most (88%) of the infants were followed up after hospitalization. Many infants failed to gain weight during the first and second weeks of life despite adequate caloric intake. During the third week there was some weight gain, and in the fourth week they seemed to gain at an accelerated rate. All the infants were symptom-free by 6 weeks of age, with no relapses. Preliminary developmental test results indicated that infants born to mothers who received methadone during pregnancy may possess a unique pattern and rate of development. Most of the older children in the sample showed age-appropriate development in the area of vocalization and language. Their performance on perceptual motor tasks was less adequate. The influence of other factors such as genetic, prenatal, and subsequent environment on development were not able to be assessed.

CONCLUSIONS

The present results lend encouragement to the possibility that the provision of a modified methadone maintenance program which includes good prenatal care and nutrition, neonatal care, and continued support and encouragement to the mother after the birth of a child may offset the detrimental effects of the neonatal withdrawal experience for the infant and foster an environment which may facilitate development within the normal range.

Rosen, Tove S., and Pippenger, Charles E. Pharmacologic observations on the neonatal withdrawal syndrome. Journal of Pediatrics, 88(6):1044-1048, June 1976.

DRUG	Methadone
SAMPLE SIZE	31
SAMPLE TYPE	Infants of Methadone-treated Women
AGE	Neonate
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	July, 1973 - June, 1974
NO. OF REFERENCES	17

PURPOSE

An increasing number of infants are born to women receiving methadone maintenance therapy. Studies have shown that these women have better prenatal care, nutrition, and lifestyles than heroin addicts. However, there appears to be an increase in neonatal morbidity with the former drug. A group of methadone-treated mothers and their infants was studied in order to determine (1) the relationship between maternal dose of methadone and the incidence and severity of neonatal withdrawal symptoms, (2) placental transfer of methadone, and (3) the relationship between maternal plasma level, neonatal plasma level, and the methadone withdrawal syndrome.

METHODOLOGY

Thirty mothers admitted to the labor-delivery suite at the Columbia University Babies Hospital during the period July, 1973, to June, 1974, who were receiving methadone therapy or who had recently undergone detoxification from methadone, were included in the study. Blood samples as well as urine samples were taken from mothers and neonates. Infants were examined daily after birth. Withdrawal signs were graded as severe, moderate, or mild. Those infants with severe withdrawal comprised Group I; those with moderate signs, Group II; those with mild signs, Group III; and those with no symptoms, Group IV. Twenty-eight mothers were receiving 10 to 100 mg/day (mean 38 ± 4) of methadone; two mothers were detoxified four and seven days, respectively, before delivery.

RESULTS

There were 27 term infants, whose weight ranged from 2,130 to 3,920 gm. Four infants, including a set of fraternal twins, were born prematurely. Their weights ranged from 1,730 to 2,510 gm.

The overall incidence of withdrawal signs was 86%. The most frequent signs were tremors, hypertoxicity, and irritability. Seizures occurred in five of the neonates: four in the severe group and one in the moderate group. These occurred between days six to eight of life, and were difficult to control. The only urine in which a drug was not detected was from the infant born to the mother detoxified seven days prior to delivery.

A tendency toward mild or nonexistent symptoms was noted in infants born to mothers on low doses of methadone (mean 27 mg), while a tendency toward moderate-to-severe symptoms was noted in infants born to mothers receiving high doses (mean 43 mg). However, this difference between the two doses was not statistically significant. The onset of withdrawal symptoms occurred later when the last dose of methadone was administered close to the time of delivery. Those infants born to mothers who received their methadone less than 20 hours prior to delivery did not develop withdrawal symptoms until 30 to 52 hours after delivery, whereas those infants born to mothers who received their last dose of methadone more than 20 hours before delivery developed symptoms within 8 to 24 hours after delivery.

At birth, neonatal plasma concentrations of methadone were significantly lower ($p<.01$) than maternal concentrations. Five days after delivery, methadone could no longer be detected in infant plasma. When the rate of decline in plasma concentrations of methadone was compared for the four groups, it was noted that for Groups I and II the decline was more rapid than for Groups III and IV. Plasma half-life for Group I was 16 hours; for Group II, 18 hours; Group III, 23 hours; and Group IV, 25 hours.

CONCLUSIONS

It is difficult to predict the likelihood of withdrawal symptoms on the basis of the maternal dosage of methadone in individual cases. Neonatal plasma levels of methadone were significantly lower than the maternal levels. The ratio of maternal to neonatal plasma concentration of methadone was nearly 2.2:1, indicating placental limitation of the transfer of methadone from mother to fetus. The differences in plasma half-life in the different withdrawal groups may be a reflection of individual variability in the metabolism and excretion of methadone. The results suggest that when methadone is administered during pregnancy, the daily dose should be maintained at the lowest possible level (20 to 30 mg/day) since the likelihood of neonatal withdrawal syndrome is less in this dosage range. These doses do not guarantee, however, that the infant will not experience withdrawal symptoms.

Soloway, Irving H., and Walters, Dianne B. Neonatal drug dependence: Developmental and biocultural considerations. Addictive Diseases, 2(4):673-688, 1976.

PURPOSE

The biocultural factors which contribute to the theoretical and clinical issues of neonatal narcotic dependence were examined in an attempt to formulate a developmental model of children born to addicted mothers.

SUMMARY

The nutritional status of the mother has been shown to be the most critical factor in the development of a healthy fetus (Montagu, 1972); but because addicts fail to ingest an adequate diet even when food is available, their nutritional status is substandard. A study by Naeye, Blanc, and Paul (1973) revealed a high correlation between fetal body, organ, and cellular growth and maternal prepregnancy nutritional status, as well as maternal nutritional intake in early, mid, and late gestation. There have been no systematic studies of the incidence and prevalence of gonorrhea and syphilis among drug addicts; however, the subjective impression of researchers and clinicians is that there is a higher incidence of venereal disease among urban female heroin addicts than among nonaddicted women from the same socioeconomic and ethnic groups. Data on the incidence of gonorrhea among drug addicts are virtually nonexistent. Lack of hard data regarding the incidence and prevalence of venereal disease among urban heroin addicts makes hypothesizing difficult, but based on studies by Perlmutter (1967) and Stoffer (1968), and the impressions of clinicians, it can be said that congenital syphilis and gonorrhea are important factors in any consideration of maternal addiction and its consequences on the life and health of the neonate. Sola's survey (1971) of psychopathology among drug addicts uncovered a high incidence of depression and performance difficulties. Soloway's research (1975) on the social structure of nuclear families of urban heroin addicts showed a high incidence of alcoholism, suicide, and psychosis among members of the addicts' immediate families--as well as absentee fathers, foster homes, etc. Cherubin and his colleagues (1972) compared 44 liver sections of autopsied addicts, and found 5 to be normal, 36 hepatic, and 3 exhibiting fatty change. Ashley Montagu (1962) held that hepatitis poses a serious threat to a pregnant woman's immediate health, as well as that of the fetus.

The interuterine transfer of opiates during pregnancy seems well established (Rosenthal et al., 1964). The exhibition of heroin withdrawal syndromes in infants born to addicted mothers has been documented over the last eight decades (Happel, 1892; Sussman, 1963; Zelson et al., 1971; Statzer and Wardell, 1972; Finnegan and Macnew, 1974). However, there have been, to date, no quantitative postmortem analyses of placental or umbilical materials which would confirm placental transfer of opiates and determine the amount of the drug which actually reaches the fetus. Naeye et al. (1973) suggested that heroin was one factor responsible for growth retardation in human fetuses, apart from maternal undernutrition. Undernutrition in addicted mothers has also been associated with an increased severity of withdrawal signs exhibited by the neonates (Finnegan and Macnew, 1974) and has been established as one major cause of low birth weight (Ademowore et al., 1972; O'Sullivan, 1965). Stern (1966) showed that postpartum hemorrhage, toxemia, breech presentation, Caesarean section, prematurity, and stillborn babies were all more frequent among 66 pregnant heroin addicts than among nonaddicted pregnant women treated at the same hospital. Toxemia of pregnancy has also been associated with overall retarded motor behavior, reduced muscle tone, and general excitability (Schulte et al., 1971), as well as with a high rate of perinatal mortality (Fitzgerald and Clift, 1958; Brash, 1949). The chief abnormality in the majority of infants who die is small size for gestational age (Naeye, 1966); the incidence of prematurity in infants born to addict mothers has been consistently high. These high incidences of prematurity and low birth weight are probably consequences of the combined effects of drugs ingested during pregnancy and undernutrition before and during the intrauterine period.

The mortality rate for infants born to addicted mothers is higher than for those of nonaddicted mothers (Stern, 1966; Zelson et al., 1971). Further, the infant of an addicted mother enters the world as a drug-dependent individual, and thus one of its first extrauterine experiences is withdrawal signs. Neonatal withdrawal has been related to the duration and type of maternal addiction and to the mother's drug level prior to giving birth (Finnegan and Macnew, 1974). The withdrawal of narcotics-dependent infants is usually treated with doses of paregoric, phenobarbital, chlorpromazine, or diazepam (Rosenthal et al., 1964). However, studies of neonates who were treated for withdrawal with central nervous system depressants revealed significantly reduced sucking rate, reduced average sucking pressure, and reduced amount of nutrient consumed during sucking (Kron et al., 1973). Also, the lactating mother who uses heroin, or any opiate, transmits the drug to the infant who feeds at her breast (Blinick et al., 1973; Montagu, 1962). The infant addict also runs a high risk of developing performance and behavioral problems in maturing; these problems are related to intrauterine development and to neonatal withdrawals, and low birth weight. The addict mother will probably exhibit the same basic characteristics as the depriving mother in terms of individual personality profiles and interaction patterns within the family. For both the addicted mother and her child, therapeutic intervention must be initiated as early as possible in the process; they should be treated by medical and social service agencies.

Advocates of methadone maintenance claim remarkable success in dealing with prenatal and obstetrical problems. However, there is a need for caution regarding the use of methadone in managing neonatal addiction. Early reports that the use of methadone among pregnant addicts significantly eased the withdrawal severity for the neonate (Krause et al., 1958) are contradicted by more recent data; methadone maintenance has been associated with greater severity of withdrawal symptoms than those found in infants of heroin addicts (Zelson, 1973), longer duration of withdrawal symptoms (Rajegowda et al., 1972), and cases of sudden unexpected death in methadone-maintained women (Pierson et al., 1972).

CONCLUSIONS

The sum total of preconceptual, intrauterine, neonatal, and postnatal deleterious influences of heroin represents a battery of biocultural conditions which indicate that the children of drug addicts are, by definition, a population of high psychiatric and social risk, and that intensive study and early intervention are critically needed. Also, there is a need for more research on the effects of long-term methadone maintenance on neonatal withdrawal and on the growth and development of the fetus and neonate.

Stimmel, Barry, and Adamsons, Karlis. Narcotic dependency in pregnancy. Journal of the American Medical Association, 235(11):1121-1124, 1976.

DRUG	Opiates; Methadone
SAMPLE SIZE	115
SAMPLE TYPE	Pregnant Women; Infants
AGE	Adults (mean 24); Neonates
SEX	Female
ETHNICITY	66 Hispanic; 40 Black; 9 White
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Case Studies; Longitudinal
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	1968 - 1974
NO. OF REFERENCES	18

PURPOSE

Increasing attention has been given to the chronic intake of various narcotics during gestation, and their effects upon mother and child. Particular emphasis has been placed on methadone. In order to elucidate the relationship between methadone maintenance therapy and outcome of pregnancy, the course of gestation was closely followed among patients enrolled in a methadone maintenance program.

METHODOLOGY

All women (N=28) who gave birth while enrolled in the methadone maintenance program from March 1968 to May 1974 at the Mount Sinai Hospital in New York City formed Group 1 of the study. These women had 31 pregnancies and were followed closely with respect to methadone dose, use of other drugs, and medical complications. Urinalysis was performed at least weekly. Two other groups of women were studied for comparison purposes. Group 2 consisted of 57 women who were users of either "street" heroin or "street" methadone and whose infants were born between July 1971 and April 1974. Group 3 consisted of 30 women free of mood-altering medications who gave birth between January and October of 1972. The majority of women in all three groups were Hispanic (over 50%), followed by blacks (30% or more), and whites (10% or less). Their mean age was 24 years.

The records of all infants born to the women were reviewed to determine the incidence of fetal distress, Apgar scores at one and five minutes, birth weight, neonatal complications, and the presence of withdrawal symptoms.

RESULTS

The daily dose of methadone in Group 1 ranged from 20 to 100 mg, with 65% being maintained on a daily dose of 50 mg. Use of other drugs was documented in four women in Group 1. The great variability in potency of "street" heroin and "street" methadone made it impossible to estimate the average narcotic dose taken during pregnancy for Group 2. Coexisting medical problems were seen in 16% of Group 1 patients, 37% of Group 2 patients, and 47% of Group 3 patients. Anemia was the most frequent problem encountered in each of the groups (13%, 26%, and 23%, respectively).

Regarding the characteristics of the newborn infants, Apgar scores at one and five minutes were essentially the same in all groups. Fetal distress (tachycardia, bradycardia, meconium, or stillbirth) existed in 16% of Group 1, 42% of Group 2, and 23% of Group 3. This difference was significant at the .05 level for babies in Group 2 as compared to those in Group 1. The mean birth weight of infants in Group 1 was 170 gm greater than that of those in Group 2 (2,933 gm vs. 2,763 gm) and 376 less than that of Group 3 infants ($p<.01$ and $p<.001$, respectively, when compared to Group 3 infants). Infants in Group 3 were relatively free of problems in the early neonatal period. Excluding withdrawal symptoms, no major problems existed among Group 1 infants, except that 3 newborns exhibited transient respiratory distress. In contrast, respiratory distress was noted in 9 infants in Group 2, and there were congenital defects in 4 infants. One infant was stillborn and one died six hours after birth. Narcotic withdrawal was diagnosed in 18 infants (58%) in Group 1 and 29 (59%) of those in Group 2. The onset of symptoms occurred in less than 24 hours in 28% in Group 1, as compared to 59% in Group 2 (significant at the .01 level).

CONCLUSIONS

Maintenance of the pregnant addict under closely supervised methadone therapy is compatible with an uneventful pregnancy and birth of a healthy infant whose withdrawal symptoms in the neonatal period are readily controllable.

Yacavone, David; Scher, Jordan; Kim, Y.R.; Schwitz, Barbara; and O'Connor, Helen. Heroin addiction, methadone maintenance, and pregnancy. Journal of the American Osteopathic Association, 75(9):826-829, 1976.

DRUG	Methadone; Heroin
SAMPLE SIZE	17
SAMPLE TYPE	Infants; Methadone-Treated Women
AGE	Neonates
SEX	Not Specified
ETHNICITY	3 Black; 2 Asian; 12 White
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Laboratory/Examination Program/Clinic Statistics
DATE(S) CONDUCTED	1972 - 1974
NO. OF REFERENCES	6

PURPOSE

The impact of narcotic addiction and methadone treatment on human reproduction has become the subject of much controversy and debate. Some believe that narcotics themselves are responsible for low birth-weight infants. Others question the possibility of a single etiology and raise the point that many factors, other than narcotic intake, interact in the addictive pregnancy. A study was conducted at the Methadone Maintenance Institute (MMI) in Chicago in order to investigate the effects of prenatal maternal care, nutritional status, and lifestyle on pregnancy outcome.

METHODOLOGY

Between February 1972 and December 1974, there were 28 pregnancies reported among the clients at MMI. Eleven of the pregnancies were interrupted by medical abortion, and the remaining 17 were managed by MMI staff. Twelve of the 17 mothers had been on the program prior to conception and were under competent obstetrical care, in good nutritional state, and free from complications of other drug abuse. The remaining five pregnant women were either new to the program, having entered 1 to 6 months prior to delivery, or were patients considered unsuccessful in terms of rehabilitation. Their eating and sleeping patterns were disorganized and inappropriate to pregnancy. They refused to follow dietary and nutritional recommendations. Several were found to be abusing drugs other than methadone. All mothers were receiving methadone in daily doses ranging from 45 mg to 80 mg per day, except for one who detoxified two months prior to delivery. The patients ranged in age from 17 to 28 years (mean, 22.5 years). Twelve were white, 3 were black, and 2 were Asian.

Live babies were given 1-, 3-, 5-, and 10-minute Apgar scores, and serum and urine determinations for drugs. The babies were monitored closely during the initial 7-10 days for signs and symptoms of withdrawal.

RESULTS

All but one of the 17 pregnancies ended in delivery in the eighth or ninth month and were considered full-term labors. Of the 14 babies examined, birth weights ranged from 1,820 gm to 2,830, with a mean weight of 2,625 gm. Eleven of the infants were at or above 2,500 gm, which was judged average or above average for gestational age. These children were born of the women who were conscious of their nutritional needs. None of these infants was premature. All demonstrated narcotic dependence, but were without other complications. Their Apgar scores were well within the normal range. Only one infant born to this group died, but the attending neonatologist did not feel that the death was attributable to narcotics or their complications.

The women in the second group, who neglected good prenatal care, gave birth to one nonaddicted infant, two addicted infants, and one full-term stillborn baby; one fetus was expelled prior to term for unknown reasons. Of the three live infants, one was considered premature and the other two were judged small for gestational age.

In the first two weeks of life, all 14 infants demonstrated withdrawal symptoms. If a child demonstrated less than 5 symptoms, withdrawal was judged mild; if more than five, moderate; if treatment was required, moderate to severe; if the infant demonstrated seizure activity and needed 5 days of treatment, withdrawal was considered severe. Of the 11 children of the first group of mothers, withdrawal was judged severe in only 1, mild in 3, moderate in 2, and moderate to severe in 2. Offspring of the second group included 2 severe cases and one unaddicted (born to the mother who detoxified prior to delivery).

Regarding severity of withdrawal with respect to maternal dose of methadone, there appeared to be no relationship. Mothers on high doses delivered babies average-to-large in birth weight. In addition, babies born of mothers on low doses demonstrated both mild and severe symptoms.

CONCLUSIONS

Findings of low birth weight, moderately complicated, even possibly slow-starting infants are more the result of a summation of factors rather than narcotic intake alone. Quite possibly, the nutritional state of the mother, in conjunction with aberrant lifestyle, and in combination with the interrupted misuse of another drug or multiple drugs, is of greater significance.

Driving Behaviors

Illustration:

Puddle
M.C. Escher
Gift of C.V.S. Roosevelt
National Gallery of Art, Washington, D.C.

Peters, B.A.; Lewis, E.G.; Dustman, R.E., Straight, R.C.; and Beck, E.C. Sensory, perceptual, motor and cognitive functioning and subjective reports following oral administration of delta-nine-Tetrahydrocannabinol. Psychopharmacology, 47(2):141-148, 1976.

DRUG	Marihuana
SAMPLE SIZE	20
SAMPLE TYPE	Volunteers
AGE	Adults (range 21-34)
SEX	10 Male; 10 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Experimental
DATA COLLECTION INSTRUMENT	Questionnaire; Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	50

PURPOSE

While many studies tend to support a popular belief that marihuana use has predominantly detrimental psychological and physiological effects, the lack of statistically significant research results, and occasional findings of facilitation of performance while under the influence of marihuana, especially for chronic users, make it possible to question this generalization. A study was conducted to further clarify the immediate effects of ingested delta-nine THC on sensory, perceptual, motor and intellectual functioning in humans.

METHODOLOGY

Subjects consisted of two groups of volunteers. Each group was composed of 5 males and 5 females, 21 to 34 years of age. One group (occasional users) reported their marihuana use did not exceed twice per month over the past 3 to 4 years. The second group (frequent users) reported using the drug twice or more weekly during the same period. There were no significant differences between the two groups in age, educational level, intelligence, or weight.

The test battery consisted of ten tests, including color-number matching, spiral aftereffect, critical flicker fusion, reaction time, dot test, rhythm test, finger oscillation, Halstead Category Test, tactual performance, and trail making. All subjects were administered the first 7 tests on four separate occasions separated by at least 1 week. During these four sessions, subjects recieved either a placebo or 0.2, 0.4, or 0.6 mg/kg of THC in a double-blind procedure. The last three tests were given only once. In addition to these tests, the subjects were to estimate the amount of THC they had received during each session, and to answer questions on the Subjective Drug Effects Questionnaire (SDEQ).

RESULTS

The influence of THC on the proficiency and variability of test performance was minimal. Proficiency on only one of tests 1-7 was significantly affected. Simple reaction time was longer following drug ingestion at all dose levels ($p<.05$). Performance variability was increased significantly ($p<.05$) on the single reaction time and color-number matching tests. There were significant differences in proficiency or variability with the last 3 tests, all measures of higher mental abilities and problem solving.

To determine drug effects on combined or overall proficiency, the means of tests 1-7 were combined for each subject by being converted to standard scores. An analysis of variance of the standard scores indicated a reduced overall proficiency following drug ingestion as compared to placebo performance ($p<.05$). There was a slight tendency toward a dose-related decrease in proficiency, but this was not significant. Application of the same statistical procedures to variability of performance showed a significant increase in variability following drug ingestion. Standard deviations associated with the medium and high dose were reliably larger than those associated with the placebo ($p<.01$) and low dose ($p<.05$). There were no differences between occasional and frequent users on the test battery.

Subjective effects increased as dose increased from 0.2 to 0.6 mg. Occasional users were more affected by the low and medium doses than were the frequent users. They felt more tense, jittery, silly, dizzy, and less in control. With the highest dose, the experience of both groups became more similar. While euphoria was experienced at all dose levels, feelings of dysphoria were more prevalent at the higher dose levels. Occasional users experienced more dysphoria than did frequent users ($p<.05$). Regarding estimate of dosage, the placebo dose was most often correctly identified by both groups. While there were no significant differences between groups, the frequent user was most accurate in estimates.

CONCLUSIONS

THC had a small but consistent detrimental effect on both proficiency and variability of performance. In contrast, THC exerted profound effects on the subjective experiences of the volunteers as assessed by the Subjective Drug Effects Questionnaire. The small impairment noted in objective test performance as contrasted to the large effects on subjective responses suggests that the principal effects of marihuana are on the autonomic nervous system rather than on higher cortical functions.

Schaefer, Carl F.; Gunn, C.G.; and Dubowski, Kurt. Dose-related heart-rate, perceptual, and decisional changes in man following marihuana smoking. Perceptual and Motor Skills, 44:3-16, 1977.

DRUG	Marihuana
SAMPLE SIZE	12
SAMPLE TYPE	Volunteers
AGE	Adults (range 21 - 38)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Oklahoma
METHODOLOGY	Experimental
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Questionnaire; Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	25

PURPOSE

Information-processing and decision-making performances of man were studied following smoking of placebo, social, and high doses of marihuana. Reaction time was chosen as one sensitive behavioral indicator of effects of marihuana, since changes in response latency may reflect drug influences in any plane--perceptual, cognitive, or manipulative. In an oddity-discrimination task, marihuana smoking was expected to impair the selective inhibition of strong response tendencies and to produce a dose-related slowing of reaction time. In another information-processing task testing perceptual accuracy, and using a tachistoscope with and without irrelevant information, it was expected that marihuana would intensify the distracting influence of irrelevant information.

METHODOLOGY

The subjects were 12 healthy male volunteers ranging in age from 21 to 38 years. The subjects were housed on a research ward for 5 days. The following doses of marihuana in prepared cigarettes were used: (1) placebo; (2) social dose containing 10 mg THC, and (3) high dose containing 20 mg THC. Subjects were given three different doses of marihuana, with one dose administered each day for three successive days according to a Latin-square design. Identical physiological and behavioral testing procedures were followed in each session. Tests included: heart-rate recordings; subjective assessment of drug effects and dosage level; perceptual accuracy, using a tachistoscope; complex reaction time, using an oddity-discrimination test; and a rod-and-frame test.

RESULTS

Marihuana smoking increased heart rate; the increase was dose-related ($p<.01$). There was a significant interaction ($p<.01$) between sessions and the change in heart rate produced by marihuana. Baseline rates were slightly but significantly higher on Session 2 and 3 than Session 1 ($p<.01$), while peak heart rate dropped moderately from session to session ($p<.05$).

Regarding perceptual accuracy, the addition of irrelevant information to the display of relevant information significantly ($p<.05$) reduced performance during tachistoscopic presentation. There was a significant interaction ($p<.05$) of dose level and irrelevant information condition. A dose-related decline in performance occurred when there was no irrelevant display ($p<.05$), but in the presence of irrelevant information there was no significant effect of THC dosage. The decline in accuracy with the addition of irrelevant information was significant for the placebo ($p<.01$) and the social dose ($p<.05$), but not for the high dose. There was also a significant ($p<.05$) interaction between sessions and the presence or absence of irrelevant information. The presence of irrelevant information significantly decreased accuracy in Session 1 ($p<.01$) and Session 2 ($p<.05$), but not in Session 3.

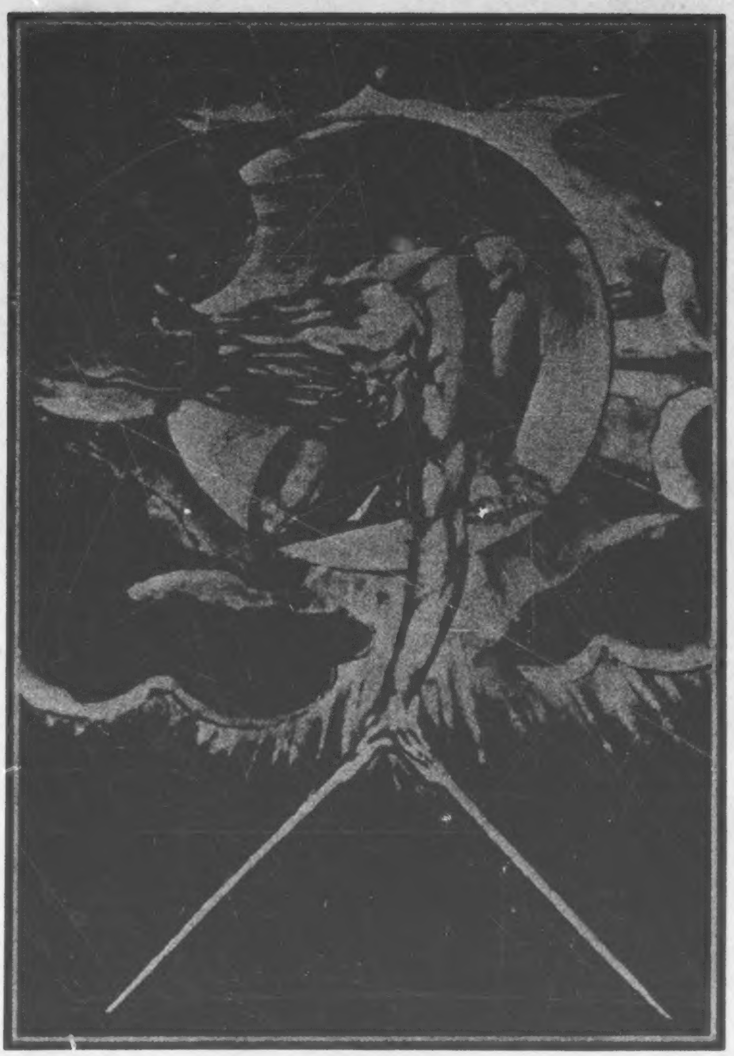
Using an oddity-discrimination task, reaction time increased moderately as a function of THC dosage. This dose effect was statistically significant ($p<.05$) only when the state of the odd button varied unpredictably from trial to trial. While there was no instance in which the 10 mg THC dose significantly increased reaction time relative to the placebo dose, the 20 mg THC dose significantly ($p<.05$) increased reaction time.

There was no significant effect of marihuana on field dependence as measured by the rod-and-frame test. All subjects were field-independent. Regarding subjective assessment of being "high" and dosage rating, both increased significantly ($p<.05$) with increases in the THC dosage. With respect to enjoyment, no significant changes occurred as a function of either dose or sessions.

CONCLUSIONS

Consistent with earlier reports by other investigators, marihuana smoking in this study produced increases in heart rate which were linearly related to THC dosage. The dose-related impairment in perceptual accuracy which occurred in the absence of distracting information supports the notion of a marihuana-induced deficit in attention and/or short-term memory. It was surprising, however, that this drug effect disappeared when the irrelevant information was included in the display. The results of the reaction-time test replicated the general finding of other investigators that the stereotypic tendency to respond to stimulus change slows reaction time whenever the odd button is the one that has not changed state. Overall, doses of marihuana which were sufficient to evoke strong subjective ("high") effects as well as marked physiological (heart-rate) responses produced relatively weak, though significant, impairments in information processing.

Death



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Barton, William I. Deaths involving methadone: A statistician's view. Drug Forum, 4(2):139-158, 1975.

DRUG	Methadone; Heroin
SAMPLE SIZE	1,850
SAMPLE TYPE	Narcotics-related Deaths
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	United States
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Medical Examiner/Coroner Reports
DATE(S) CONDUCTED	1972 - 1973
NO. OF REFERENCES	4

PURPOSE

Data were obtained from medical examiners and coroners throughout the United States in order to determine the number of deaths involving methadone and other narcotics in 1972.

METHODOLOGY

During 1972 and 1973, medical examiners and coroners around the U.S. were contacted in order to obtain data on narcotics-related deaths in 1972. Information was collected according to the following categories: (1) heroin (morphine) and methadone; (2) heroin (morphine) (and other drugs); (3) methadone (and other drugs); and (4) other narcotics-related "overdoses" (there is some disagreement over the meaning of this term).

RESULTS

In 31 areas of the country in 1972, there occurred 1,850 narcotics-related deaths (primarily "overdoses"). Methadone (alone, or with other drugs, including heroin) was involved in 20% of the deaths. Of the 31 areas, 24 had at least one narcotics-related death involving methadone. Only two areas recorded more deaths involving methadone than other narcotics, including heroin: the District of Columbia, and Erie County (Buffalo), New York. Some 72% of the narcotics-related "overdoses" in the District of Columbia, and 60% in Erie County, involved methadone.

Based on information from 25 areas, the data showed that, on an aggregate basis, narcotics-related deaths decreased from 1,724 in 1971 to 1,658 in 1972 (4%). However, there was an increase in methadone-involved cases for the same period: about 9% (156) of the 1,724 narcotics-related deaths in 1971 involved methadone, and 20% (332) of the deaths in 1972 involved methadone. Those areas which had methadone involvement in 1971, but had a larger number of deaths involving methadone in 1972, were: New York City, Philadelphia County, District of Columbia, Dade County (Miami), New Orleans, and Cuyahoga County (Cleveland).

CONCLUSIONS

Because methadone is apparently a drug which breaks down more slowly in the body tissues and fluids than other narcotics, such as heroin, it is possible that an increase in deaths classified as due to methadone could be, at least in part, a result of when toxicology is carried out. Another reason for the increase in deaths involving methadone may lie with the increasing reliance of treatment personnel on methadone maintenance as a treatment modality. However, a direct correlation between an increase in the number of clients enrolled in methadone maintenance treatment and an increase in the number of deaths should not be assumed. For example, in the District of Columbia, data indicated that none of the methadone overdose deaths occurring in 1972 involved individuals enrolled in methadone maintenance programs--the drug being acquired, in each instance, from illicit sources. Federal regulatory measures regarding administration of methadone maintenance programs were taken in December 1972 and March 1973; if these regulations are effective in reducing methadone diversion, and are successful in eliminating major program deficiencies, it is likely that deaths involving methadone will decrease.

Barton, William I. Drug-related mortality in the United States, 1963-71. Drug Forum, 4(1): 79-89, 1974.

DRUG	Multi-Drug
SAMPLE SIZE	Varied
SAMPLE TYPE	Deceased
AGE	Cross-Age
SEX	Both Sexes
ETHNICITY	Cross-Cultural
GEOGRAPHICAL AREA	United States
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	State Health Departments; National Center for Health Statistics
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	0

PURPOSE

Vital statistics data on cause of death are derived from two sources in the United States: state health departments and their vital statistics offices, and the National Center for Health Statistics, which obtains its information in a cooperative arrangement with the state health departments. An examination was made of death statistics for the years 1963-1971.

METHODOLOGY

Data on drug-related deaths from the Center for 1963-1969, and state data for the years 1968-1971, were gathered. For the years up to 1967, the Seventh Revision of the International Classification of Diseases (ICD) was used. From 1968 to 1971, the Eighth Revision of the International Classification of Diseases, Adapted (ICDQA) was used.

RESULTS

According to the data, there were about 9,920 drug-related deaths in the United States in 1971. Of these, 1,318 deaths were coded to "drug dependence." When a drug was specified, 65% of the time it was opium, an opium alkaloid, or an opium derivative. Some 2,453 of the 9,920 deaths were ascribed to "accidental poisoning by drugs and medicaments"; 1,026 were due to accidental poisoning by analgesics and antipyretics, of which 867 were due to "opiates and synthetic analogues." About 32% of the deaths due to accidental poisoning by drugs and medicaments were due to "other sedatives and hypnotics"; of these, about 58% were due to "barbiturates." Only 5% of the 2,453 accidental deaths were due to poisoning by autonomic nervous system and psychotherapeutic drugs, and 2% were from accidental poisoning by other central nervous system depressants and stimulants. The remaining 19% of these 2,453 deaths were assigned to selected drug subcategories. It is important to note that only 22 deaths in 1971 were coded to the category "amphetamines," which supports the general statement made by medical examiners that amphetamines in and of themselves do not generally kill. In 1971, there were 639 deaths coded to the category containing deaths involving a combination of alcohol and other drugs. Overall, almost half (4,155) of the 9,920 drug-related deaths counted were intentional. For 1,355 deaths involving drugs, 27% involved "barbituric acid and derivatives"; 2% "salicylates and congeners"; and 5%, "psychotherapeutic agents."

Data for 1969-1971 suited to the purposes of developing trend analysis were available from 48 states and the District of Columbia (Nevada and Arkansas were omitted). Data for these areas show that there was a 26% increase in drug-related deaths between 1969 and 1971, the greatest increase (42%) occurring for accidental deaths. Deaths coded to "drug dependence" and deaths coded to "poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted" increased about 36%. Among the specific changes in the period 1969-1971 were: under the category "drug dependence," deaths coded to "opium, opium alkaloids, and their derivatives" rose 91%; accidental deaths coded to "opiates and synthetic analogues" increased 109%; and deaths coded to "barbiturates" increased less than 1%. Some of the subcategories were so broad, lumping together deaths from a variety of drugs ("morphine and other drugs"), that it was impossible to obtain specific information on deaths from certain drugs of interest. Such was the case with deaths involving heroin; it was possible for deaths involving heroin to be ascribed to at least nine subcategories of the ICD.

CONCLUSIONS

The reason some persons certify cause of death on the vital certificates as "an adverse reaction to a certain drug" is that there is some controversy about the term "overdose." Also, if it cannot be proved that a lethal dosage of a certain drug is responsible for causing death, the term "adverse reaction to drug" can be stated on the vital certificate. Thus, using cause-of-death coding rules these deaths, which the certifier may know to be the result of illicit drug usage, become ascribed to a surgical and medical complication cause-of-death category. This mislabeling of deaths is the result of having precise and technical coding rules for data which are not provided in a precise and technical way. It would seem that a more detailed analysis of drug-related deaths could be obtained by using case records kept by medical examiners and coroners. Although the use of vital statistics data on cause of death may serve to generate mortality statistics in satisfaction of some purposes, it should be used only as a "benchmark" in determining the number of drug-related deaths.

Barton, William I. Narcotics-related deaths decrease in 1972 from the number of narcotics-related deaths in 1971. International Journal of the Addictions, 9(4):513-529, 1974.

DRUG	Opiates
SAMPLE SIZE	Not Specified
SAMPLE TYPE	Narcotics-related Deaths
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	United States
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Medical Examiner/Coroner Reports
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	2

PURPOSE

A survey of medical examiners' and coroners' offices in the United States was conducted by the Special Action Office for Drug Abuse Prevention in order to determine the number of narcotics-related deaths in 1972.

METHODOLOGY

The survey was carried out by means of a telephone call to some 45 areas, selected because they had a relatively large population (over 500,000) or a sizable drug problem, or both. Twenty-five areas had data on narcotics-related deaths for 1972. Telephone data were confirmed by a written letter from the medical examiners/coroners. Included among the 25 areas were New York City; Philadelphia; Washington, D.C.; Dade County (Miami); Cook County (Chicago); Essex County (Newark); Cuyahoga County (Cleveland); Dallas County (Dallas); Harris County (Houston); and San Francisco. These areas accounted for 21% of the continental United States population in 1970.

RESULTS

In 1971 there was a total of 1,853 narcotics-related deaths occurring in the 25 areas. For the same areas in 1972, there were 1,738 narcotics-related deaths--a decrease of over 6%. The decrease was greatest in the North Central region of the U.S. (31%) and least in the Northeast (4%). In the West, there was about a 23% increase. In Cook County there were 190 narcotics-related "overdoses" in 1971 compared to 137 in 1972 (a decrease of 28%); in Dallas County there was a 67% increase in heroin and/or methadone "overdose" deaths in 1972. On a city-wide basis, New York City accounted for close to 50% of the narcotics-related deaths in 1971, and about 54% in 1972.

For 15 areas there were data for narcotics-related deaths for the period 1969-1972. The total number of deaths for all these areas in 1969 was 1,013; in 1970, 1,202; in 1971, 1,269; and 1972, 1,214. Thus there occurred a 19% increase in narcotics-related deaths between 1969 and 1970, and another 6% increase between 1970 and 1971. These increases were countered by a 4% decrease in narcotics-related deaths between 1971 and 1972.

CONCLUSIONS

For the 25 areas included in the study there occurred a decrease of over 6% in narcotics-related deaths when data from all the areas were aggregated. As far as indications of the seriousness of the drug problem go, this may be one of the firmest indications to date that federal, state, and local efforts to control and reduce the drug abuse problem may be working.

Baselt, Randall; Allison, Donna; Wright, James; Scannell, James; and Stephens, Boyd. Acute heroin fatalities in San Francisco. Western Journal of Medicine, 122(6):455-458, 1975.

DRUG	Heroin
SAMPLE SIZE	217
SAMPLE TYPE	Heroin Overdose Fatalities
AGE	Adults (mean 31.5)
SEX	173 Male; 44 Female
ETHNICITY	76 Black; 133 White
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Medical Examiner/Coroner Records
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	13

PURPOSE

There have been numerous reports on the epidemic occurrence of heroin overdose fatalities in the metropolitan areas of the U.S. during the late 1960's and early 1970's. Recent statistics have shown that the problem has diminished in many areas while increasing in others--particularly in a number of West Coast cities. An investigation of the problem in San Francisco was undertaken to determine what type of population was involved, and to discover cause of death by means of forensic chemical examination.

METHODOLOGY

For the period 1970-1973, 217 heroin overdose fatalities were examined. Identification as a heroin overdose fatality was made on the basis of information gathered at the scene of the death and from pathologic and toxicologic investigations. Gas-liquid and thin-layer chromatography was used to analyze urine and bile specimens for presence of morphine and alcohol. The findings for this group of cases were compared to 25 cases reported in the period 1962-1965, and to fatalities reported in other metropolitan areas.

RESULTS

Heroin fatalities in San Francisco occurred at a more or less regular annual rate until 1966. Afterwards there was a dramatic increase in mortalities, with San Francisco surpassing New York City, Washington, D.C., and San Diego in 1972 and 1973. While the male-to-female ratio of the San Francisco victims was similar to that reported in New York and Washington, D.C., for the same period of time, there was a predominance of whites in the San Francisco fatalities. Furthermore, in San Francisco the white-to-black ratio was on the increase. The group of heroin overdose victims from the 1970-1973 period was more predominantly white (61% vs. 48%) and younger (31.5 years vs. 38.5 years) than the group from the 1962-1965 period. Of the 217 cases from the 1970-1973 period, 160 had known addresses within San Francisco. The districts with the highest number of fatalities were those with the greatest crime rates and the highest population densities. However, these points of residence did not necessarily represent the areas in which narcotics were purchased or used.

In nearly all of the victims, the presence of morphine was noted in bile or urine, and in about half, the results of blood-alcohol tests were positive. Measurement of blood-morphine concentrations in the victims showed no significant difference from the concentrations noted in a control group of heroin addicts dying from traumatic causes and from overdose victims with positive blood alcohol.

CONCLUSIONS

It is evident from the data that San Francisco's heroin problem is rising to very significant proportions, and that it is involving increasing numbers of young white men living in the central sections of the city. While the reasons for this increase have not become evident, law enforcement officials have suggested that the efforts of the federal government to control the supply of heroin to the East Coast have resulted in a diversion of narcotics to West Coast ports. The results of the blood-level study indicate that morphine blood levels per se are meaningless in attempting to assign a cause of death, since morphine levels were not significantly different in narcotics users dying of causes other than heroin overdose.

Dinovo, Eugene C.; Gottschalk, Louis A.; McGuire, Frederick L.; Birch, Herman; and Heiser, Jon F. Analysis of results of toxicological examinations performed by coroners' or medical examiners' laboratories in 2000 drug-involved deaths in nine major U.S. cities. Clinical Chemistry, 22(6):847-850, 1976.

DRUG	Multi-Drug
SAMPLE SIZE	2,000
SAMPLE TYPE	Drug-involved Fatalities
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Medical Examiner/Coroner Reports
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	6

PURPOSE

Data were collected on drug-involved deaths in nine U.S. cities in order to determine the variation among cities in procedures, methods, test results, and drugs tested for.

METHODOLOGY

Data on 2,000 psychoactive drug-involved deaths in nine major U.S. cities were collected from medical examiners and coroners. The U.C.I. Reporting Form for Drug-Involved Deaths was used to obtain the data. The form consists of 135 items of inquiry in such areas as biographics, demographics, on-site investigation, toxicological examination, postmortem examination, treatment before death, and suicide. The 2,000 cases comprised a representative sample from each of the cities of deaths from psychoactive drugs for the period 1972-1974. The nine cities were New York, Chicago, Los Angeles, Philadelphia, Cleveland, Dallas, Miami, San Francisco, and Washington, D.C.

RESULTS

Alcohol, diazepam, morphine, barbiturates, and propoxyphene comprised 68% of the total drugs quantitated by the nine cities. The percentages of the total comprised by these drugs ranged from a low of 38.2% for Washington, D.C., to a high of 85.2% for Los Angeles. New York showed an overwhelming proportion of methadone assays--more than 3 times the proportion of the other cities combined. Philadelphia showed a relatively high number of amphetamine, methamphetamine, and methadone assays, and Washington a large number of methadone, methamphetamine, quinine, and phenmetrazine assays. Of all the cities, only Washington (29 cases) and Dallas (1 case) reported phenmetrazine cases.

Methadone was found in 60% of the cases for New York and in 49% of the cases for Washington. In contrast, it was found in much smaller proportions in Philadelphia, Dallas, Miami, and San Francisco; in less than 1% of cases reported by Los Angeles and Cleveland; and was not reported at all by Chicago. Morphine was found in 48% and 43% of the cases reported by Los Angeles and Chicago, respectively, and in only 6.6% of Miami cases. Washington and Philadelphia showed the greatest proportion of amphetamine-involved deaths. About 15% of the cases reported by these cities were found to involve amphetamine, whereas the average for the other cities was 1.2%.

Ninety-three percent of the drug analyses were performed on the blood, urine, bile, liver, or stomach contents. Phenothiazines, amphetamine, methamphetamine, and quinine were preferentially assayed in urine; bile was the preferred specimen for morphine assays. Morphine was the most commonly tested-for drug in the blood, urine, and bile, closely followed by methadone in these same three fluids. A toxicology proficiency survey was done concurrently with the data collection, and results showed that the toxicological examinations performed on the 2,000 deaths by the 9 cities demonstrated a wide interlaboratory variance in the quality of the examinations.

CONCLUSIONS

Definite and potentially significant differences exist in the toxicological examinations performed by the various laboratories. However, there is a question as to what extent these are true differences, representing regional epidemiological differences, and to what extent these differences represent toxicological, instrumental, and methodological availability or sophistication, resource limitations, or other factors. This is a critical question that needs to be considered in interpreting drug-death statistics and related toxicological findings.

Haberman, Paul W., and Baden, Michael M. Drinking, drugs, and death. International Journal of the Addictions, 9(6):761-773, 1974.

DRUG	Opiates; Alcohol
SAMPLE SIZE	1,000
SAMPLE TYPE	Decedents
AGE	Adults
SEX	80% Male; 20% Female
ETHNICITY	46% White
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Laboratory/Examination
DATE(S) CONDUCTED	February - April 1972
NO. OF REFERENCES	15

PURPOSE

Alcoholism and narcotism among decedents at the Office of Chief Medical Examiner in New York City were examined. Emphasis was placed on the extent to which alcoholism and narcotism are underreported by relatives or other persons identifying decedents, or are not evident in post-mortem medical findings. Also studied were the similarities and differences among deceased alcoholics, narcotic addicts, and those with both conditions.

METHODOLOGY

The total sample consisted of 1,000 decedents 18 years of age or older, recorded consecutively and identified by a relative or other person at the Office of Chief Medical Examiner from February to April of 1972. The data included the results of post-mortem medical findings and answers to questions which informants were uniformly asked, at the time of identification of decedents, about the decedents' demographic characteristics and problems due to drinking and drug use. Medical examiner data included the nature of the place and circumstances of death, evidence of drinking or drug use at the scene, cause-of-death certification, and autopsy and toxicology findings. Complete autopsies were performed on 58% of the alcoholics and 93% of the narcotic addicts. Only those deaths which were sudden, medically unattended, traumatic, or in some way suspicious, were included in the analysis.

RESULTS

Of the total sample, 30% were classified as alcoholics and 16% as narcotic addicts. One-third of the addicts were also alcoholics and 16% of the alcoholics were also addicts. Almost three-fifths (58%) of the alcoholics and three-quarters (72%) of the narcotic addicts were identified as such by informants, with or without corroborating post-mortem medical evidence. Three-quarters (76%) of the alcoholics and four-fifths (80%) of the narcotic addicts had medical examiner identification, with or without confirmation by informants. These data indicate that a substantial minority of alcoholics and narcotic addicts would not have been classified as such without both informant and medical examiner identification; 20% of the addicts had informant identification only and no supporting post-mortem medical findings, and 42% of the alcoholics had only medical examiner identification and no confirmation by informants. For those 47 decedents classified as both alcoholics and narcotic addicts, informants were more likely to report that decedents had problems with narcotics than with alcohol (74% vs. 53%). For 43% of the alcoholics and 59% of the narcotic addicts, death was directly attributed to alcoholism or narcotism.

The alcoholic decedents differed markedly from the narcotic addicts in demographic characteristics. The addicts were much younger, more apt to be single rather than previously married, and more apt to have had some high school rather than only grade school education. More narcotic addicts than alcoholics had been in jail during the year prior to study; the alcoholics were more frequently born in Southern states, whereas the narcotic addicts were most often born in New York City.

Those decedents with both drug and alcohol problems resembled the narcotic addicts more than the alcoholics, with the exception that they were older and somewhat more likely to be male and black. They were also similar to the alcoholics in respect to more reported hospitalizations and illness. Alcoholics were more likely to have died from natural causes or accidents, while more of the narcotic addicts and those with both conditions were homicide victims.

CONCLUSIONS

Narcotic addicts were more likely to be labeled by relatives or other persons identifying decedents than were alcoholics, perhaps because of the more rapid onset of addiction and problems resulting from the daily struggle to support the habit. The data also indicate that those decedents with both conditions were in almost all cases primarily narcotic addicts. Alcohol abuse probably occurred when heroin was difficult to obtain or when the addicts were trying to lessen or stop drug use.

Lettieri, Dan J., and Backenheimer, Michael S. Methodological considerations for a model reporting system of drug deaths. In: Josephson, Eric, and Carroll, Eleanor E., eds. *Drug Use: Epidemiological and Sociological Approaches*. Washington, D.C.: Hemisphere Publishing, 1974. pp. 160-173.

PURPOSE

The task of initiating and carrying out a systematic collecting and reporting of drug-related deaths has never been performed satisfactorily, despite extensive reporting of statistics on the topic. For most purposes of classifying death, the eighth revision of the *International Classification of Diseases, Adapted* (ICDA, 1968) is the model to be implemented. This system of reporting has several weaknesses, one of which involves the fact that the drug classifications used are too omnibus when viewed as a means of measuring the nature and extent of the drug abuse problem. A reporting model for drug-related deaths is presented, using statistics from diverse sources, which suggests a workable scheme for answering some of the more pressing questions about drug-related deaths.

SUMMARY

Sources and Availability of Data

There are three systems through which drug-related deaths are reported, with little consistency prevailing among them: a medical examiner system, a coroner system, and some combination of the two. The following model is presented as one way in which drug data might be analyzed to give immediate emphasis to the drug abuse and addiction problem. For this model, drug-death data are seen as a measure of excess mortality, or the extent to which drug addicts are more likely to die than other population groups. To carry out the concept, some estimate of the live addict population, as well as some estimate of the number of deaths occurring within this population, was necessary. The same kinds of information were needed for the comparison population. Population estimates for 1970 were obtained on eight selected areas, each encompassing a large city and each making up the major portion of a standard metropolitan statistical area (SMSA). Mortality data were obtained, and two mortality rates computed: for the general population of each area, all ages, all causes; and for the general population of each area, all ages, all causes, but limited in age to persons 15-44 years old (an age range into which it was felt that most addicts would fall, and in which, therefore, most drug related deaths would occur).

Obtaining estimates of addict populations and addict deaths was a more difficult task than getting estimates of comparison general populations and death. Eventually, it was decided to use the Bureau of Narcotic and Dangerous Drugs (BNDD) 1972 estimates, and the final drug-death information for the selected areas was a mix of city, county, and SMSA data. Two estimates of drug deaths were available, one from BNDD and one from Kirschner Associates (unpublished). According to data obtained, addicts are at risk of death to a much greater extent than is the population in general; the predicted death rate for addicts aged 15-44 is predicated on that age range accounting for 80% of all addict deaths. The problem of defining drug death was evidenced by the wide variations betwen areas. The wide discrepancy between cities, the various kinds of drug-death collection systems, and other variables emphasize the need for careful reporting of drug-related deaths.

Preliminary Issues and Definitions

Several preliminary issues and definitions in a model system include the following. First, there has been argument against the widespread use of the word "overdose" on death certificates, primarily because there appear to be no consistent toxicologic standards for evaluation of what constitutes a lethal dosage. Medical examiners concede that many deaths of addicts after they "shoot up" show no evidence of larger-than-usual dosages. Part of the difficulty rests with the fact that tolerance is both relative and highly subject to change, and it is now believed that addicts can easily lose their tolerance in several days. Second, there are two main classes of drug-related deaths: directly related drug deaths (in which the drug is a sufficient and necessary condition or cause of death); and indirectly related drug deaths (in which the drug alone is not sufficient cause for death, but is a necessary contributor to the death in conjunction with some other drug, condition, or agent). Third, although the eighth revision of the ICDA did introduce two categories of importance to researchers in narcotic and drug abuse ("drug dependence" and "undetermined intentionality in the mode of death"), as yet there is no inclusive category coding for drug-related deaths, partly because of the controversy surrounding what should be defined as the cause of a drug-related death. Many drug-related deaths are buried in more general categories. Finally, the death rate for addicts is different both empirically and conceptually from the general population rate of death caused directly or indirectly by drugs; a model scheme must separate drug deaths in addicts from drug deaths in nonaddicts.

The Model Reporting System Schematic

A tentative conceptualization of an improved model reporting system would include an attempt to specify those parameters that should be examined, and the lines along which data should be collected and stored. A drug-related homicidal death is defined as one that involves as a significant motivational or triggering factor, various kinds of drug-dealing, -seeking, or -taking behavior, including innocent bystanders. The complete matrix would be a 360 X 360 cell matrix in which the following (2X8X3X5X3) subheadings would appear: person involved (perpetrator; victim); race (white; black; Puerto Rican, Cuban, Mexican-American; American Indian; Asian-American; Other; unknown); addiction (addict; nonaddict--may include infants; addiction unknown); age (0-14; 14-24; 25-44; 44+; age unknown); sex (male; female; unknown).

CONCLUSIONS

A research director can choose from two alternative research pathways. The first would be to implement some of the methodological schema here presented in a total, comprehensive, city or statewide data collection system. However, this is costly in time, effort and money. The second would be to apply a public health model of estimation to the phenomena of drug-related deaths. Certain key cities would be studied with the aim of arriving at correction factors or indexes, which could then be applied to currently collected statistical data for a larger area (state, region, etc.), and statistically correcting the available data so that it most nearly approximates the true incidence of the phenomena.

McGuire, Frederick L.; Birch, Herman; Gottschalk, Louis A.; Heiser, Jon F.; and Dinovo, Eugene C. A comparison of suicide and non-suicide deaths involving psychotropic drugs in four major U.S. cities. American Journal of Public Health, 66(11):1058-1061, 1976.

DRUG	Psychotropics
SAMPLE SIZE	651
SAMPLE TYPE	Psychotropic-involved deaths
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Washington, D.C.; Miami, Florida Dallas, Texas; San Francisco, California
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Coroner/Medical Examiner Records
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

PURPOSE

Prior to 1960 the most frequent means of committing suicide in the U.S. were firearms, hanging, and exhaust gases. Between 1953 and 1963 the incidence of suicide by drugs tripled, and by 1962 it ranked third among the methods used. In 1971 barbiturate suicide ranked fifth among males and second among females. Despite this fact, statistics on deaths associated specifically with psychotropic drugs and their relationship to suicide have been sketchy. A study was conducted in order to survey and analyze the data on psychotropic-involved deaths in four major U.S. cities.

METHODOLOGY

Data were obtained from coroners' and medical examiners' offices in the District of Columbia, Miami, Dallas, and San Francisco. A standard reporting form was used which requested information on biographic and demographic variables, treatment given prior to death, mental state of the deceased prior to death, and the results of toxicological, postmortem, and on-site investigations. A death was included in the study if a psychotropic drug was recorded as playing a significant role in the cause of death. Each of the four cities was given a quota of cases to select and was requested to draw a saturation sample for the year 1973. Some additional cases from 1972 and 1974 were included. Each death was rated as "definite suicide," "probable suicide," "suspicious," "nonsuicide," or "unknown." Analysis was limited to the "definite suicide" and "nonsuicide" groups in order to avoid the ambiguity of the other categories.

RESULTS

Among the 651 reported drug-involved deaths, 233 (36%) were listed as "definite suicide." Of the four cities, Miami had a higher ratio of suicides among its drug-involved deaths--more than

20 percentage points higher than any of the other three localities (54% versus 25% for Washington, D.C.; 30% for Dallas; 33% for San Francisco). The mean age for each suicide and nonsuicide group was highly similar among the cities. In all cities except Dallas, there was a significant difference (p<.001) in age between the suicide and nonsuicide groups, with the nonsuicide group tending to be younger. Regarding sex distribution of cases, the cities were again highly similar, with males predominating among the nonsuicides. Blacks were significantly underrepresented among drug-involved suicides in all cities, and overrepresented among the nonsuicide deaths in Washington, D.C., Dallas and San Francisco. Regarding occupational status, all cities had similar findings and thus the data for the cities were pooled and a comparison was made of the suicide and nonsuicide groups. The suicide group contained 5 times as many professionals and about 2½ times as many semiprofessionals as the nonsuicide group. Nonsuicide deaths included 2½ times as many unskilled subjects.

The most frequently mentioned drug category among the suicides was barbiturates (51%). The other groups were: sedatives, 15%; analgesics, 14%; tranquilizers, 10%; antidepressants, 6%; narcotics, 3%, and miscellaneous, 1%. There were intercity differences, with the percentage of barbiturate-involved suicides being reported as follows: 75% in San Francisco; 47% in Washington, D.C.; 35% in Miami; and 30% in Dallas. A large number of nonsuicide deaths involved narcotics: 92% in Washington, D.C.; 23% in Miami; 35% in Dallas; and 69% in San Francisco. In most instances, the narcotic deaths were listed as "accidental overdoses." In 24% of the 233 suicide cases, alcohol played a role in the death. In most cases, alcohol was combined with barbiturates and/or tranquilizers. The rate of alcohol-associated deaths (in combination with another drug judged to be primarily responsible for the death) among the nonsuicide group was about the same (27%).

Monforte, Joseph R., and Spitz, Werner U. Drug deaths involving propoxyphene--An assessment in metropolitan Detroit. Preventive Medicine, 5:573-576, 1976.

DRUG	Propoxyphene; Alcohol; Tranquilizers; Barbiturates; Narcotics
SAMPLE SIZE	68
SAMPLE TYPE	Propoxyphene-involved deaths
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	4

PURPOSE

Drug deaths attributed to propoxyphene have been reported to be on the increase throughout the country. In Detroit there were three times the number of drug deaths involving this drug in 1975 than there were in 1973. Analysis of the toxicological data obtained in these cases was undertaken to provide some explanation as to the increased frequency of deaths involving the drug.

METHODOLOGY

Toxicological analysis was done for 68 cases of propoxyphene-involved deaths for the period 1973-1975 in Wayne County, Michigan. Analysis included tests for alcohol, barbiturates, organic bases (meperidine, methadone, antihistamines), opiates (codeine, morphine), neutral drugs (diazepam, meprobamate), salicylate, and phenothiazines.

RESULTS

In only 15 instances (22% of the cases) was propoxyphene the only drug found. In the remaining cases either ethanol, ethanol plus other drugs (excluding components of Darvon Compound), or other drugs (excluding Darvon Compound) were present. In 22 of the 26 cases in which an individual had consumed alcohol prior to death, the resulting blood ethanol concentration was greater than 0.10% (w/v). This may indicate that patients undergoing propoxyphene therapy may have had a problem with alcoholism as well. In most instances, the drugs found in combination with propoxyphene were diazepam, chlordiazepoxide, diphenylhydantoin, or a barbiturate.

Almost 34% of the deaths were classified as suicides, 6% were accidents, and 60% were undetermined. The blood propoxyphene concentrations were greater than normally required for therapy, but not high enough to prove that the individual deliberately ingested a large excess of the drug. It is interesting to note, however, that ethanol and/or other drugs were present in 85% of the cases classified as undetermined. In these instances a good argument for accidental death exists. Also of importance is the fact that propoxyphene was detected in urine samples from individuals who died as a result of narcotic addiction (9 cases from 1973 to 1975). Although the abuse liability of propoxyphene has been reported to be low, the fact that some narcotic addicts were using propoxyphene for no apparent medical reasons does suggest the potential for propoxyphene addiction.

Monforte, Joseph R., and Spitz, Werner U. Narcotic abuse among homicide victims [illegible] Detroit. Journal of Forensic Sciences, 20(1):186-190, January 1975.

DRUG	Multi-Drug
SAMPLE SIZE	207
SAMPLE TYPE	Homicide Cases
AGE	Adults (35 years or less)
SEX	170 Male; 37 Female
ETHNICITY	185 Black; 22 White
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	July - September, 1973
NO. OF REFERENCES	2

PURPOSE

During 1973 the city of Detroit, Michigan, attracted nationwide attention for its alarmingly high homicide rate. Detroit constitutes approximately half of Wayne County on a population basis, but accounted for more than 90% of the homicides in that county in 1973. The toxicology laboratory at the Wayne County Medical Examiner's Office undertook a study of the presence of narcotics in a random sample of these homicide victims.

METHODOLOGY

Homicide victims 35 years of age or less were selected for this study. Bile and urine samples were submitted to the laboratory for analysis. Spectrophotofluorometry and thin-layer chromatography were employed for the identification of morphine and quinine. Other organic bases were identified by thin-layer and gas chromatography. The data obtained for this study were accumulated from July 2 through September 17, 1973. During this time, 207 homicide cases were analyzed for narcotics and related drugs.

RESULTS

Of the total homicide victims, 89.4% were black, with a male-to-female ratio of 5:1; 11.6% were white, with a male-to-female ratio of 6:1. Of all homicide victims, 52% had been consuming ethanol prior to death. One out of three homicide victims had old and recent needle tracks, with blacks having the highest incidence of tracks (36% for black males). The incidence of needle tracks was comparable in the black female and white male populations (18.8% for black females; 17.6% for white males). No needle marks were observed in any of the white female cases studied. Seventy-five percent of the persons who had needle tracks had a drug indicative of narcotic usage. Positive findings in the laboratory were obtained in 26 cases where needle tracks were not observed at postmortem examination. Morphine was the drug most frequently detected among the victims (83.3%). Quinine alone was found in ten victims.

Police define a narcotics-related homicide one in which a person is found murdered in a narcotics pad or under circumstances which indicate involvement with drugs beyond any doubt. Using these criteria, it was estimated that 11% of the homicides in Detroit in 1973 were narcotics-related. According to the wider perspective of the Medical Examiner's Office, 43% of the homicide victims were directly involved with narcotics as users.

CONCLUSIONS

The percentages of the various groups selected for this narcotics study parallel reasonably well the percentages of all the homicide victims in 1973. Therefore it may be assumed that, in terms of race and sex, the population selected for this study proportionally represents the entire population of homicide victims in 1973.

It is estimated that if pushers and dealers (possible victims of a "drug war"), people killed by addicts, and those cases where a narcotic might not be detected in the biological sample were included, the percentage of homicide victims associated with narcotics traffic could be as high as 60% to 70%.

Stanton, M. Duncan. The addict as savior: Heroin, death, and the family. *Family Process*, 16(2):191-197, 1977.

DRUG	Heroin
SAMPLE SIZE	2
SAMPLE TYPE	Addicts; Families
AGE	Adults
SEX	Male
ETHNICITY	1 Black; 1 White
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Observation
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	22

PURPOSE

It is an established fact that the mortality rate among drug addicts far exceeds that for comparable groups within the North American population. Few disagree that this high incidence is a suicidal phenomenon. Based on six years of experience working with and observing families of drug addicts, an attempt was made to: (1) place the death and addiction relationship within a familial, interpersonal system context; (2) describe some of the processes that attend it; and (3) discuss its function for the family.

SUMMARY

The function served by a person's heroin addiction relative to the rest of his family is similar to that presented by Haley (1973) for schizophrenics; i.e., the "sick" or addicted member helps to keep the family, particularly the parents, together by allowing them to unite over his incapacitation. Death issues also appear to be part of the hidden agenda of these families. Often such issues take the specific form of a death wish toward the addict--usually expressed most openly by the mother. In fact, it seems that such a mother only feels capable of expressing her "love" for her addicted son while standing over his grave. Other family members may also contribute. In general, there appears to be a conspiratorial family process that is abetted, sanctioned, or at least not resisted by most or all family members. The addict often cooperates with them, usually out of loyalty and a feeling that he owes them a great debt.

Case Study 1

Barry, aged 25 years, came from an Italian-American family. He had first used heroin at age 17 and had been addicted since the age of 20. During the first family therapy session, the mother was heard to say about Barry, "...I mean I don't care about him dying, believe me. Because that feeling is gone out of me. 'Cause that would be the best for him and me and all of us--dying like that." Toward the end of treatment, change had occurred in the family, and the parents had united in relation to Barry and were working together to get him drug-free, employed, and out of the home. Eventually it came out that he felt indebted to them. He wanted to repay the debt by staying around.

Case Study 2

Timothy, a 25-year-old black youth, was in therapy with his family. It was discovered that another son (aged 21) was also an addict, with a three-year habit. When the mother was asked how she would react if the younger son should die from drugs, her response was, "His insurance is covered. I have him insured and everything. He'll be buried decently....he won't be thrown away. He'll be laid out lovely....He'll have a new suit and shoes. No flowers...." Some time later, when the younger son found out that he had been accepted to a distant university, he went out and bought heroin and proceeded to overdose. The mother's reaction was not sorrowful, and she told the therapist that she felt good sleeping in the dead son's bed that night, that she felt him "close" to her. She described it as sleeping in the bed with him. At the funeral the family appeared to be cheerful, particularly the mother.

CONCLUSIONS

The case studies show the usual indications of family enmeshment and close mother-addict ties. The strong death wish and instruction to die is obvious along with the willingness of offspring to sacrifice themselves. The addict is suicidal more in the sense that a martyr is suicidal; he wears the mantle of both a savior and a martyr who will take the family's worst with him when he leaves. If he dies, his death is considered to be a noble one.

Cocaine

Illustration:

Eight Heads
M.C. Escher
Gift of C.V.S. Roosevelt
National Gallery of Art, Washington, D.C.

Burchard, Roderick E. Coca chewing: A new perspective. In: Rubin, Vera, ed. *Cannabis and Culture*. The Hague: Mouton Publishers, 1975. pp. 463-484.

PURPOSE

There are various theories regarding the Andeans' use of coca leaves. Major cocaine-models of coca chewing, including the "food scarcity" hypothesis of Gutierrez-Noriega and the "hypoglycemia hypothesis" of Bolton, are discussed and an alternative ecgonine model is presented.

SUMMARY

Food Scarcity Hypothesis

One of the most influential groups of proponents of the cocaine-model of coca chewing in Peru over the past several decades has been the late Carlos Gutierrez-Noriega and his associates. Gutierrez-Noriega (1949) stated that "the main cause of the coca habit is the deficiency of foodstuffs in the affected areas." This food-scarcity hypothesis argues that because of widespread scarcity of food in highland Peru and because coca suppresses hunger, the coca chewer takes coca to suppress the effects of chronic inanition. It is believed that the coca chewing itself, after some years, results in the loss of appetite and the coca chewer prefers the drug to food. The physiological effects of coca chewing are also associated with those observed with the use of cocaine hydrochloride--mydriasis, moderate increase in respiratory rate, rise in blood pressure, and an increase in heart rate. While blood sugar is said to increase in experimental animals, in only a few cases does it increase in man after a period of coca chewing.

Hypoglycemia Hypothesis

In his paper on highland peasant communities in Peru, Bolton (1973) argues that (1) there is a high incidence of "aggressive" behavior in the highland community of Incawatana, (2) that glucose homeostasis problems are widespread among the inhabitants, and (3) that there is a causal relationship between these two phenomena--the "hypoglycemia hypothesis." Bolton states that the human organism attempts to maintain glucose levels at or above the nominal level. When blood glucose falls below the nominal level, body processes occur which will raise the glucose level. If these metabolic processes are not working properly (because of adrenal exhaustion or liver disease), then behavioral and emotional means might be sought to produce the same effects. Anger and aggression often occur when normal processes are not working. Anger effectively acts as a short-run booster of glucose levels. Another part of this theory is that the person with hypoglycemia becomes hungry and chews coca to dull his hunger pains and to provide himself with energy. The coca is assumed to have an immediate effect in raising the glucose level, probably by stimulating the transformation of glycogen stores. However, long-term use is seen as complicating glucose homeostasis problems for the individual who chews.

Ecgonine-model of Coca Chewing

While in accord with Bolton's theory that coca chewing raises the blood glucose level, this theory disputes the statement that glucose level is raised by cocaine stimulation of the sympathetic part of the autonomic nervous system, and the transformation of liver glycogen by increased levels of catecholamines. What may have to be put aside is the conception that cocaine is the central alkaloid in coca chewing, and that the "coquero" adds alkaline substances to the coca bola during the process of chewing to both facilitate the extraction of cocaine alkaloids and to potentiate their action. Several studies have shown that addition of an alkaline substance to coca leaf does facilitate the extraction of the alkaloids from coca leaf, but it does so by bringing about the degradation of cocaine. In addition, it appears that while cocaine alkaloids are degraded, ecogonine (not cocaine) is the end product of hydrolysis and metabolism.

Nieschulz (1971) has shown ecgonine to be about 80 times less toxic than cocaine; that it has little or no central stimulating effect on the sympathetic nervous system, and no anesthetic or euphoric properties; and that oral doses do increase the exertion capacity of mice, although less so than similar oral doses of cocaine. That cocaine is not the central alkaloid involved in coca-leaf mastication should, if nothing else, lead researchers to be very cautious about conducting experiments with pure cocaine hydrochloride on either mice or men and attempting to generalize from this to the mastication of coca leaf.

The theory also disputes the idea that coca chewing supresses hunger and that it makes the user prefer the drug to food. Observations in Andean communities where coca is important have indicated that there is no correlation between the chewing of coca and the loss of appetite or the preference of the drug to food. It was often observed that after spending 8 to 10 hours in a session where coca chewing was continuous, users would end the session by having a large meal.

There are other alkaloids in coca leaf, including tropeines and hygrines. Ecgonine is an amino alcohol base, closely related to tropine, the amino alcohol and active component of atropine. The combination of ecgonine and the tropeine alkaloids in the coca leaf may be acting on the parasympathetic nervous system as opposed to the sympathetic. Atropine also results in a rise in blood glucose, and has been recommended as a medication in helping to control hypoglycemia. Since tropine is part of coca chewing, it may be important in the control of problems of malabsorption and the too rapid transit of glucose.

CONCLUSIONS

It may very well be that chewing coca leaf is an important cultural mechanism for managing problems of glucose utilization, since coca leaf is chewed just as frequently after a high carbohydrate meal as before. After all, Andean peasants classify coca as a medicine and not as a "substitute for food," as many researchers who adhere to the cocaine-model of coca chewing have for too long led people to believe.

Finkle, Bryan S., and McCloskey, Kevin L. The forensic toxicology of cocaine. In: Cocaine: 1977. NIDA Research Monograph, vol. 13. Washington, D.C.: Government Printing Office, 1977. pp. 153-192.

DRUG	Cocaine
SAMPLE SIZE	111
SAMPLE TYPE	Cocaine-Involved Fatalities
AGE	Adults (68% under 30)
SEX	81 Male; 30 Female
ETHNICITY	70 White; 25 Black; 12 Spanish-American; 4 Unknown
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Questionnaires; Medical Examiner/Coroner Records
DATE(S) CONDUCTED	August 1976 - January 1977
NO. OF REFERENCES	23

PURPOSE

A study was undertaken to assess the role of cocaine in postmortem medico-legal investigations, and to determine whether cocaine has caused the significant and growing number of sudden, unexplained deaths.

METHODOLOGY

Data collection and evaluation were carried out between mid-August 1976 and January 1977. Toxicologists and pathologists from the medical examiners' and coroners' offices at 27 sites across the United States and Canada participated in the study. A total of 62.9 million or 30% of the U.S. population was covered by these sites. The respondents were to detail any fatal cases for the period 1971-1976 in which cocaine was the specific causative agent. Background information on each victim and the circumstances surrounding death were gathered in order to isolate common factors or trends which might be useful in predicting cocaine fatalities.

RESULTS

The total number of fatalities on which data were finally collected that in any way involved cocaine was 111. This represented a relatively low incidence when compared with fatalities attributed to almost any other major drug of abuse (e.g., heroin and barbiturates). Death was caused by drugs in 86 cases and by cocaine alone in only 26 cases. Morphine was detected analytically in one-third of the 86 cases. The deceased were principally young, white males. The majority (68.5%) were under 30. Almost two-thirds were white; blacks represented 25 of the cases; and Spanish-Americans represented 12 cases. There were 81 males and 30 females.

Occupational status was known for 69 of the 111 cases; nearly 35% could be classified as manual blue-collar workers, while relatively few professionals or students were represented.

Regarding physical and mental health, there was no defined history of recent acute or chronic illness for 85.6% of the cases. In contrast, 61.3% of the deceased had a "psychiatric history." However, the "psychiatric" problems were almost exclusively related to drug abuse or misuse, with a low incidence of alcohol abuse. Only one case had a history of attempted suicide.

Twenty-three of the 111 deceased had a known, documented history of cocaine abuse; of these, 19 were classified as victims of accidental drug-caused deaths. The causes of death for the remaining cocaine abusers were: natural, 1; homicide, 2; suicide, 1. For 4 of the 26 cocaine-only cases, route of administration was unknown; of the other 22 cases, 16 had used the intravenous method, 2 had used the nasal method, and 4 had used the oral method. Intravenous self-administration, as evidenced by the data, was frequently used.

Only ten (11.8%) of the total drug-death cases reached a hospital before they died. Almost two-thirds of the victims (65%) died in less than 5 hours and most of these died in the first hour following ingestion. For the 26 cases involving only cocaine, 74% died in less than 2 hours, and more than half died within one hour. There was no correlation between survival time and route of drug administration. Terminal symptoms were observed for only half (13) of the deaths involving only cocaine, and were entirely central nervous system-mediated--usually seizures, followed by respiratory arrest, coma, and death. Alcohol was present in significant concentrations in about 25% of the drug deaths, with a mean blood value of 0.1%. In 70% of the drug-death cases, the blood concentrations of cocaine were lower than 4 mcg/ml, and in more than one-third were 1 mcg/ml or lower. For fatalities involving only cocaine, 70% had blood concentrations lower than 9 mcg/ml. For seven of the study cases classified as drug-caused deaths, it was established that the cocaine was ingested intranasally. The blood concentrations in six of these cases were very high: 2.8-5.9 mcg/ml. The overall study findings and the seven cases in particular clearly refute the assumption that nasal insufflation of cocaine is completely safe.

CONCLUSIONS

While the study should not be construed as an assessment of cocaine use in the U.S. and Canada, it does indicate that drug abusers are dying from the use of cocaine itself or, more commonly, in combination with morphine.

Fischman, Marian W., et al. Cardiovascular and subjective effects of intravenous cocaine administration in humans. Archives of General Psychiatry, 33:983-989, 1976.

DRUG	Cocaine; Dextroamphetamine
SAMPLE SIZE	9
SAMPLE TYPE	Drug Users
AGE	Adults (range 21-35)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Experimental
DATA COLLECTION INSTRUMENT	Laboratory/Examination; Psychological Tests; Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	26

PURPOSE

Although the pharmacological effects of cocaine have been studied in infrahuman organisms, there have been few studies of its physiological and behavioral effects in humans. This is true, despite the fact that over the past few years there has been an increase in the incidence of cocaine abuse in the U.S. Cocaine and dextroamphetamine appear to share many of the same characteristics and are frequently considered to be in the same drug class. A study was conducted in which the physiological and subjective effects of intravenous cocaine administration in humans were compared with those seen after intravenous dextroamphetamine administration.

METHODOLOGY

Nine male volunteers, each with a long history of illicit intravenous cocaine use, were included in the study. Their ages ranged from 21 to 35. All subjects were admitted to the clinical research ward of Billings Hospital in Chicago, and were maintained in the hospital for the duration of the two-week experiment. Cocaine hydrochloride was administered 3 or 4 times per week, never more than once daily and always in an ascending dose series. Doses ranged from 4 mg to 32 mg. Subjects also received placebo and two intravenous injections of 10 mg dextroamphetamine. Physiological measures included blood pressure, heart rate, temperature, and respiration. Subjective effects of drug use were assessed by items from the Addiction Research Center Inventory (ARCI) taken from the morphine-amphetamine, pentobarbital, chlorpromazine, alcohol, LSD, and benzedrine scales. Subjective effects were also assessed by the stimulant form of the Profile of Mood Scales (POMS). Subjects also were told to identify the drug they had been given and to compare it on a scale from 0 to 10 (0=placebo, 5=the same, and 10=the highest ever taken).

RESULTS

Intravenous cocaine administration produced a significant ($p<.05$) dose-related increase in heart rate in all subjects. Mean heart beat peaked at 100 beats per minute after 16 mg, and 112 beats per minute after 32 mg cocaine. Four and 8 mg did not cause an increase in absolute heart rate. Regarding percent change in heart beat in a 30-minute period, 4 mg cocaine did not differ from placebo (saline solution); 8 mg had an intermediate effect, with a median peak change in heart rate of 21%; 16 and 32 mg induced median peak changes of 32% and 34%. Heart rate returned to predrug baseline by 46 minutes following all doses of cocaine. A dose-related increase ($p<.01$) in blood pressure after intravenous cocaine administration was also observed. The effect of dextroamphetamine on blood pressure was closely similar to that seen after 24 mg of cocaine, both in terms of peak and duration of effect. There was no dose of cocaine that closely resembled the dextroamphetamine effect on heart rate, with the latter drug effecting a greater increase in heart rate. Respiration and temperature data were not presented, although both respiration and skin temperature showed great intrasubject variability after administration of placebo, as well as during predrug baseline determinations. Core temperature remained constant during all phases of the study.

Regarding subjective effects, all subjects were able to accurately discriminate doses of cocaine above 4 mg, as well as 10 mg of dextroamphetamine, from placebo. They were less able to discriminate between cocaine and dextroamphetamine. Sixteen milligrams of cocaine was generally rated as similar to the average dose that subjects were self-injecting on the street. Dextroamphetamine was rated as having a subjective effect comparable to 12 and 16 mg of cocaine. The ARCI was administered before and after administration of drugs. Amphetamine, morphine-amphetamine, and benzedrine scale scores all increased after cocaine injection in a dose-related fashion. The depressant scale scores decreased at all doses of cocaine except 4 mg. Dextroamphetamine caused similar, though not identical, effects on these scores. Analysis of the POMS data indicated that increasing doses of cocaine were found to have a statistically reliable positive effect ($p<.05$) on three mood clusters: friendliness, amphetamine-like feelings, and vigor. Similar results were found for the dextroamphetamine.

CONCLUSIONS

Although cocaine has local anesthetic as well as psychomotor stimulant actions, its stimulant actions clearly mimic those reported for other stimulant drugs such as the amphetamines. These drugs have been reported to produce pressor effects, tachycardia, increased scores on various stimulant-correlated subjective effects questionnaire scales, and general reports of "euphoria" in the subjects using them.

Siegel, Ronald K. Cocaine: Recreational use and intoxication. In: Cocaine: 1977. NIDA Research Monograph Series, vol. 13. Washington, D.C.: Government Printing Office, 1977. pp. 119-136.

DRUG	Cocaine
SAMPLE SIZE	85
SAMPLE TYPE	Drug Users
AGE	Adults (range 21-38)
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Los Angeles, California
METHODOLOGY	Exploratory/Survey
DATA COLLECTION INSTRUMENT	Interviews; Laboratory/Examination; Psychological Tests; Questionnaire
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	41

PURPOSE

An investigation of 85 social/recreational users of cocaine was undertaken in order to obtain information about the state of cocaine intoxication. Such variables as personal history, drug usage patterns, and environmental setting were examined.

METHODOLOGY

A total of 85 social/recreational cocaine users were recruited through advertisements in several Los Angeles-area newspapers. All subjects had used a minimum of 1 gram of cocaine per month for 12 months prior to the study. The subjects were male, 21-38 years old, and were examined and tested in the Neuropsychiatric Institute at UCLA. Examination included a personal history questionnaire, drug history questionnaire, mental status examination, MMPI, Experiential World Inventory (EWI), in-depth interview, physical examination, and visual imagery and perception tests.

RESULTS

All subjects had histories of multiple drug use. Concomitant with their use of cocaine, 85% were using alcohol; 66%, cannabis preparations; 57%, caffeine; 8%, amphetamines; and 5%, hallucinogens. All subjects reported that cocaine was their recreational drug of choice and 73 subjects identified themselves as regular cocaine users and only casual users of other drugs. All subjects employed the intranasal route of administration; 12 had experimented with smoking cocaine, and 6 with chewing coca leaves. When using intranasally, subjects selfadministered one "cokespoonful" per nostril. Using an average street purity of roughly 58%, this amounted to an average dose of 8.7 mg (total for both nostrils). Most subjects repeated the administration an average of 3 times per night, usually at 15- or 30-minute intervals. Cocaine use generally occurred in social settings among friends who wished to share a pleasurable experience. Their use was motivated by social factors and was always voluntary. Most (75%) purchased their own cocaine, while the remainder shared use with others in social settings. Cocaine was viewed by users as a social drug, while LSD and marihuana were generally viewed as individually oriented and asocial drugs. Cocaine was viewed as an "ideal" drug in terms of convenience in use, minimal bulk, rapid onset of effects, minimal duration of action with few side effects, high degree of safety, and no aftereffects. Cocaine was also viewed as an exotic drug which had status appeal. The subjects felt that cocaine was not addictive, except perhaps with intravenous use, and thus, recreational intranasal use would not result in escalating patterns of use. Some subjects did engage in intensified use characterized by long-term patterned use of at least once a day. Such use was motivated by a perceived need to obtain relief from a stressful situation or to maintain a certain self-prescribed level of performance. Nonetheless, users referred to this use as a "run" or "binge"--terms normally used for periods of repeated dosing found in all groups of cocaine users (from experimental users to social/recreational users).

Regarding intoxication effects, subjects repeatedly sought and experienced euphoria (100%), stimulation (82%), reduced fatigue (70%), diminished appetite (67%), garrulousness (59%), sexual stimulation (13%), increased mental ability (12%), alertness (7%), and increased sociability (6%). Some negative effects included restlessness (70%), anxiety (34%), hyperexcitability (28%), irritability (16%), and paranoia (5%). Subjects reported positive effects in all intoxications, and negative effects in only 3 percent of the intoxications. A total of 37 (44%) of the subjects experienced some perceptual phenomena consisting chiefly of increased sensitivity to light, halos around bright lights, and difficulty in focusing the eyes. These 37 subjects also experienced some lapses of attention; 16 reported difficulty in thinking; and some experienced chronic mydriasis. A total of 15 subjects reported hallucinatory experiences in vision, touch, smell, hearing, and taste. Subjects usually became aware of the hallucinations during epidodes of intensified use. Subjects described the events as pseudohallucinations, lacking the concomitant delusion that such events really existed. There appeared to be an orderly progression of hallucinations from simple "snow lights" through geometric forms to tactile sensations. Unlike previous accounts of "cocaine bugs," subjects did not see insects but did feel itches and other sensations which were "like" insects crawling on the skin. Even though manifesting these behaviors, none of the subjects showed any abnormal profiles on either the MMPI or the EWI. Thus, the perceptual changes suggest only the presence of hallucinosis, events which users found to be transient and which disappeared when they went from periods of intensifed use back to more moderate social recreational use.

Spotts, James V., and Shontz, Franklin C. The Life Styles of Nine American Cocaine Users--Summaries. NIDA Research Issues Series, vol. 16. Washington, D.C.: Government Printing Office, forthcoming.

DRUG	Cocaine
SAMPLE SIZE	9
SAMPLE TYPE	Cocaine Users
AGE	Adults (range 21-44)
SEX	Male
ETHNICITY	White; Black
GEOGRAPHICAL AREA	Kansas City, Missouri
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Interviews; Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	100+

PURPOSE

An intensive investigation of nine cocaine users in the metropolitan Kansas City area was undertaken, using a battery of dimensional, morphogenic, and sociopsychological measures. The study provided empirical and clinical detail with regard to both the personal characteristics of the users and the situational context of their cocaine use.

METHODOLOGY

The nine subjects were male, between the ages of 21 and 44, and included both blacks and whites. The subjects' education ranged from 10 to 13 years of schooling. Regarding socioeconomic status they ranged from sharecroppers' to millionaires' sons among whites, and from poor to middle-class persons among blacks. The occupational level of participants ranged from positions paying $4,000 to $35,000 per year, and included both legal and illegal occupations. Some had served time in prison, others had not. Using a representative case method, all participants were interviewed at length and in depth about their life histories and usage of drugs. They were examined with standard psychological tests of intelligence and personality as well as specially constructed and individualized morphogenic and semimorphogenic instruments. The participants also described in detail their daily activities for a full two-week period of time.

FINDINGS

The results showed clearly that each participant was a unique individual. Overall level of drug usage was found to be the most appropriate variable around which to organize the findings. Characteristics associated with relatively low levels of use were: use of cocaine for pleasure, to make the world seem like an imaginary paradise, and to help the user compensate for an inability or unwillingness to accept life's responsibilities. Characteristics associated with relatively higher levels of usage were: use of cocaine to provide support for self-concept, or (at high levels) to provide the energy needed to succeed in the competitive world, or (at the highest level) to induce a state of blissful obliviousness to overwhelming life problems. At higher levels of usage, pleasure was present, but it was counterbalanced by adverse effects such as increased tension, anxiety, paranoia, hallucinations, fear of overdose, and (in one case) death. Perhaps the pressing question in the public mind is whether cocaine is addictive. Disregarding distinctions between psychological and physiological addiction, the participants in this study were quite clear about the strength of their attachment to the drug. They indicated that using cocaine was an attachment of choice but not of absolute necessity. They stated that cocaine produced no long-term withdrawal or addictive symptoms. The negative effects of coming off the drug were dissipated mainly by sleep and food. Most of the subjects were confirmed users and would be regarded by most professional therapists as poor risks for treatment.

CONCLUSIONS

Perhaps a lesson that society itself must learn is that a certain proportion of people within it will always be like some of the participants in this study. These are deeply troubled persons who cannot manage their lives by themselves in socially acceptable ways, and some seem incapable of the kind of genuine intimacy that might enable them to reorganize their existences. They are willing to trade everything for the relatively brief moments of ecstasy a drug produces. Even if cures were possible, the cost in time, effort, and money would be so great as to be prohibitive.

Waldorf, Dan; Murphy, Sheigla; Reinarman, Craig; and Joyce, Bridget. Doing Coke: An Ethnography of Cocaine Users and Sellers. Washington, D.C.: the Drug Abuse Council, 1977. 76 pp.

DRUG	Cocaine
SAMPLE SIZE	32
SAMPLE TYPE	Cocaine Users
AGE	Adolescents; Adults (mean 24)
SEX	Both Sexes
ETHNICITY	White
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Ethnographic
DATA COLLECTION INSTRUMENT	Interviews; Observation
DATE(S) CONDUCTED	1974-1975
NO. OF REFERENCES	21

PURPOSE

Many myths surround cocaine and its effects on people who use it. Often these myths are conflicting, with some researchers claiming the drug is dangerous and others reporting its enhancing effects. A major problem in cocaine research is the dearth of knowledge about cocaine's effects. Often, extreme users are studied as opposed to the more common moderate users. Also, research subjects tend to be heroin addicts who are undergoing drug treatment, and study sites are most often mental hospitals, prisons, or drug treatment programs. In order to avoid some of these methodological problems, a six-month ethnographic study was made of a community of cocaine users in the San Francisco area.

METHODOLOGY

Subjects consisted of 32 cocaine users, all of whom related to each other on a family or friendship basis. The group was predominantly white and middle-class. The mean age of the subjects was 24, with a range of 16-51 years. Nearly all had used legal and illegal drugs from an early age. Two methods of study were employed: systematic field observations, and in-depth tape-recorded interviews. Observations in the community of users were conducted over a period of six months. In-depth interviews were conducted over three months in 1974 and 1975. All authors were acquainted with, or active participants in, the group under study.

RESULTS

Generally, drug seeking and using was not a major activity of the group. Drug using was never a major activity in and of itself; it was nearly always part of some other activity and was regarded casually and matter-of-factly. The major activities of the group were working or going to school, followed by visiting, "going out," and leisure. With few exceptions, everyone either worked or went to school, or both. Construction work for men and waitressing for women were the most common occupations, but there were also a lawyer and three nurses. After work, visiting was the most frequent and time-consuming activity. Almost every day, three or four people would gather at one or the other of two family dwellings. Visiting consisted of talking, watching TV, eating, drinking beer and wine, smoking marihuana, and getting high. When cocaine was available, the group snorted cocaine. Cocaine, considered a luxury, tended to be used during visiting more than during any other major pursuit.

Like marihuana, cocaine selling was not a particularly profitable enterprise except at the smuggler and ounce-dealer levels. Most cocaine sales were conducted among friends for relatively small profits, or for drugs. The majority of sellers engaged in cocaine sales to maximize their own supplies, or their buying power, rather than for large profits. Pricing of cocaine was dependent upon a relatively complex network of factors: the prevailing prices, costs to the seller, purity, relationship of the seller to the buyer, the length of time it took to complete a deal, and the amount consumed by the seller. Prices usually went down for friends. Cash sales were the rule for the smallest unit (grams), but credit was extended regularly for larger units when the buyer was also a seller and could be trusted. Knowledge of a direct seller with a ready supply of cocaine was not common to all the members of the group. More often the user knew a third party who bought the drug for him.

Contrary to popular myths, cocaine was not observed to be a potent aphrodisiac nor to cause users to become depressed, paranoid, or violent. The most recurrent negative effects were nose irritations and short- and long-term "coke outs." Heavy users also believed that prolonged use resulted in dependence. Short-term coke outs usually occurred after one or two days of protracted use and seemed generally mild; a good night's sleep usually restored the cocaine user. Long-term coke outs appeared to be more severe and to cause obvious changes in behavior. Daily use for a duration of one or two months sometimes resulted in general restlessness, irritability, and edginess. Prolonged effects often caused disruptions in relationships with family and friends. Most users recognized this pattern of behavior and, when they experienced it, they would abstain from using cocaine for a number of days.

CONCLUSIONS

Under federal law, cocaine is considered a narcotic. A first offense for trafficking cocaine can be punished by up to 15 years in federal prison and $25,000 in fines. From the study observations, it appears that cocaine does not justify such stringent control and harsh punishment. If future research supports the findings of this study, and it is found that injected cocaine does not have severe effects, it is suggested that efforts be made to change the laws that criminalize users. The first priority should be more research on the effects of cocaine in both natural and laboratory settings. Proper consideration should be given to dosage levels and different methods of use. Dosage levels should be within the parameter of common usage, and snorting--the most popular method of use in the U.S.--should be given more emphasis than it has been accorded in the past.

Indexes

When terms reflect the content of the abstract as a whole, they are indexed only to the first page of each abstract. Otherwise, terms are indexed to the specific page.

DRUGS

The general and specific names of drugs mentioned in each abstract, as used by the author of the document.

GEOGRAPHIC LOCATORS

Organized by state, includes the cities, counties, or regions where the study was carried out, or any references to geographic locations within an abstract.

INSTITUTIONS

The actual institution where research was conducted, or to which an author was affiliated.

INSTRUMENTS

The specific instruments or scales used in the research reported by the study.

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